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Print ISSN: [3006-2497](#) Online ISSN: [3006-2500](#)Platform & Workflow by: [Open Journal Systems](#)**Climate Change and Global Governance: Evaluating The Effectiveness of The Paris Agreement****Shakeel Shaheen**

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Climate change has emerged as one of the most pressing global challenges confronting the international community in the twenty-first century. Rising global temperatures, increasing frequency of extreme weather events, melting glaciers, and rising sea levels have created profound environmental, economic, and political consequences across the globe. These developments have transformed climate change from a purely environmental concern into a multidimensional issue affecting global security, economic stability, and international cooperation. Because climate change is a transboundary phenomenon that affects all regions of the world, it requires collective action and coordinated policy responses through mechanisms of global governance.

Within the field of international relations, global environmental governance has evolved through the development of international institutions, multilateral environmental agreements, and transnational networks of actors. Among the most significant milestones in this process is the adoption of the Paris Agreement in 2015 under the framework of the United Nations Framework Convention on Climate Change. The Paris Agreement represents a major shift in international climate policy by introducing a flexible system of nationally determined contributions that encourages participation from both developed and developing countries.

This research paper examines the effectiveness of the Paris Agreement as a mechanism of global climate governance. The study explores the evolution of international climate institutions, theoretical perspectives explaining environmental cooperation, and the political dynamics shaping global climate negotiations. By analyzing the institutional structure of the Paris Agreement and its implementation challenges, the paper evaluates whether the agreement is capable of addressing the long-term goals of global climate stabilization.

The study concludes that while the Paris Agreement has succeeded in expanding global participation and strengthening international dialogue on climate policy, its effectiveness remains constrained by voluntary commitments, limited enforcement mechanisms, and geopolitical tensions among major powers. Strengthening global climate governance will therefore require enhanced institutional mechanisms, greater financial support for developing countries, and stronger political commitments from major emitters.

1. Introduction

Climate change has become one of the most significant global issues shaping international politics and policy in the twenty-first century. The increasing concentration of greenhouse gases in the Earth's atmosphere, largely driven by human activities such as fossil fuel consumption, industrial production, and deforestation, has resulted in rising global temperatures and significant environmental changes. Scientific research has demonstrated that these climatic transformations pose serious threats to ecosystems, biodiversity, and human societies.

The global nature of climate change presents unique challenges for international cooperation. Unlike many traditional political issues that can be addressed at the national level, climate change requires coordinated global responses because the actions of one country can significantly affect environmental conditions in other parts of the world. As a result, climate change has become a central topic within the field of international relations, particularly in discussions related to global governance and collective action.

International cooperation on climate change began to emerge in the late twentieth century as scientific evidence regarding global warming became increasingly convincing. One of the most important developments in this process was the establishment of the Intergovernmental Panel on Climate Change in 1988. The IPCC was created to assess scientific research related to climate change and provide policymakers with reliable information regarding the causes and potential impacts of global warming. The growing scientific consensus on climate change eventually led to the negotiation of the United Nations Framework Convention on Climate Change in 1992. The UNFCCC established the basic institutional framework for international climate cooperation and introduced important principles such as "common but differentiated responsibilities," which recognizes that developed countries have historically contributed more to greenhouse gas emissions and therefore bear greater responsibility for addressing climate change.

Subsequent climate negotiations produced several international agreements designed to regulate greenhouse gas emissions. One of the most notable agreements was the Kyoto Protocol, which established legally binding emission reduction targets for industrialized countries. However, the Kyoto Protocol faced significant challenges due to limited participation and the withdrawal of major emitters. In response to these challenges, the international community adopted the Paris Agreement in 2015. The Paris Agreement introduced a new model of climate governance based on nationally determined contributions (NDCs), transparency mechanisms, and long-term international cooperation. The agreement aims to limit global warming to well below two degrees Celsius above pre-industrial levels while pursuing efforts to restrict temperature increases to 1.5 degrees Celsius.

Despite its diplomatic success, the effectiveness of the Paris Agreement remains a subject of intense debate among scholars and policymakers. Critics argue that the voluntary nature of national commitments may limit the agreement's ability to achieve meaningful reductions in greenhouse gas emissions. Others emphasize the importance of international institutions and global norms in shaping state behavior and encouraging stronger climate action.

This research paper seeks to evaluate the effectiveness of the Paris Agreement as a mechanism of global climate governance. The study examines the historical evolution of international climate cooperation, theoretical perspectives explaining environmental governance, and the political dynamics influencing

climate negotiations. Through this analysis, the paper aims to assess whether the Paris Agreement represents a viable solution to the global climate crisis.

2. Evolution of Global Climate Governance

Global climate governance has evolved through a complex process involving scientific discovery, political negotiation, and institutional development. Early international environmental initiatives during the 1970s and 1980s focused primarily on issues such as air pollution, marine pollution, and wildlife conservation. However, as scientific research increasingly highlighted the dangers of global warming, climate change began to emerge as a major international concern.

One of the most important milestones in the development of climate governance was the creation of the Intergovernmental Panel on Climate Change. The IPCC's assessment reports have played a crucial role in shaping global understanding of climate science and informing international policy debates. By synthesizing scientific research from thousands of experts around the world, the IPCC has provided policymakers with a comprehensive understanding of the causes and consequences of climate change. The establishment of the United Nations Framework Convention on Climate Change marked the beginning of formal international climate negotiations. The convention created a platform for regular meetings among participating countries known as the Conference of the Parties (COP). These meetings provide opportunities for governments to negotiate climate policies, review progress, and develop new agreements.

The Kyoto Protocol represented the first major attempt to operationalize the objectives of the UNFCCC. The protocol required industrialized countries to reduce their greenhouse gas emissions by specific percentages relative to 1990 levels. However, the agreement faced several difficulties, including political opposition in some countries and limited participation by developing nations.

The limitations of the Kyoto Protocol eventually led to the development of a new approach to climate governance. This approach emphasized broader participation, flexible commitments, and increased transparency in climate policies. The Paris Agreement represents the culmination of these efforts.

3. Literature Review

Scholarly research on global climate governance has expanded significantly in recent decades. Researchers have examined various aspects of international environmental politics, including the role of institutions, the influence of power politics, and the effectiveness of environmental treaties.

One important strand of literature focuses on the role of international institutions in facilitating cooperation among states. Scholars such as Robert O. Keohane argue that international regimes help states overcome collective action problems by establishing rules, providing information, and monitoring compliance. According to this perspective, environmental agreements create institutional frameworks that enable states to coordinate their policies and pursue shared environmental goals.

Another body of research examines the effectiveness of international environmental agreements. Scholars such as Daniel Bodansky analyze the legal and institutional mechanisms that determine whether environmental treaties achieve their intended objectives. These studies highlight the importance of transparency mechanisms, compliance systems, and enforcement provisions in determining the success of international agreements.

Other scholars emphasize the role of power politics in shaping global climate governance. From this perspective, the outcomes of climate negotiations often reflect the strategic interests of powerful states

rather than purely environmental considerations. Major emitters such as the United States and China play a decisive role in determining the direction of international climate policies.

Recent research has also highlighted the growing influence of non-state actors in climate governance. Environmental organizations such as Greenpeace and World Wide Fund for Nature actively participate in climate advocacy campaigns, scientific research, and policy monitoring.

4. The Structure and Mechanisms of the Paris Agreement

The Paris Agreement represents a significant transformation in the architecture of international climate governance. Unlike earlier climate treaties that imposed legally binding emission targets on a limited group of industrialized nations, the Paris Agreement adopts a more flexible and inclusive approach designed to encourage participation from all countries. This shift reflects lessons learned from previous climate negotiations and acknowledges the complex political and economic realities that shape global climate policy.

The central objective of the Paris Agreement is to limit the rise in global average temperatures to well below two degrees Celsius above pre-industrial levels while pursuing efforts to limit warming to 1.5 degrees Celsius. Achieving this target requires substantial reductions in global greenhouse gas emissions over the coming decades. The agreement also emphasizes the importance of strengthening resilience and adaptive capacity in countries that are particularly vulnerable to the impacts of climate change.

One of the most innovative aspects of the Paris Agreement is the introduction of Nationally Determined Contributions (NDCs). Under this system, each participating country determines its own climate commitments based on national circumstances and capabilities. Governments are required to submit their NDCs to the international community and update them every five years with progressively stronger commitments.

This bottom-up approach differs significantly from the model adopted by the Kyoto Protocol, which imposed top-down emission reduction targets primarily on industrialized countries. While the Kyoto system sought to enforce legally binding obligations, it ultimately struggled to achieve universal participation. By contrast, the Paris Agreement prioritizes inclusiveness and flexibility in order to encourage broader engagement.

Another important mechanism within the Paris Agreement is the global stocktake process. Every five years, participating countries collectively assess progress toward achieving the agreement's long-term goals. This process is designed to evaluate global emission trends, identify gaps in current commitments, and encourage countries to increase their climate ambitions.

Transparency and accountability are also central components of the Paris framework. The agreement establishes a transparency system that requires countries to report regularly on their greenhouse gas emissions and progress toward implementing their climate commitments. These reports are subject to technical review by international experts, which helps ensure credibility and comparability across countries.

Climate finance represents another critical pillar of the Paris Agreement. Developed countries have pledged to mobilize financial resources to support climate mitigation and adaptation efforts in developing nations. This financial assistance is particularly important for countries that lack the economic capacity to invest in renewable energy technologies or climate-resilient infrastructure.

Despite these institutional innovations, the effectiveness of the Paris Agreement ultimately depends on the political will of participating countries. Because national commitments remain largely voluntary, the

agreement relies heavily on diplomatic pressure, public accountability, and international cooperation to encourage stronger climate action.

5. Political Dynamics of Global Climate Negotiations

International climate negotiations are shaped by complex political dynamics involving competing national interests, economic considerations, and geopolitical rivalries. Although climate change is widely recognized as a global problem requiring collective action, governments often prioritize short-term domestic interests over long-term environmental goals.

One of the most significant political challenges in climate negotiations involves the distribution of responsibilities between developed and developing countries. Industrialized nations have historically produced the majority of greenhouse gas emissions since the beginning of the industrial revolution. As a result, many developing countries argue that wealthy nations should bear greater responsibility for reducing emissions and providing financial assistance.

This debate has been central to climate negotiations since the early 1990s and remains a contentious issue within the international climate regime established under the United Nations Framework Convention on Climate Change. Developing countries often emphasize the principle of “common but differentiated responsibilities,” which recognizes that while all countries share an obligation to address climate change, their responsibilities should reflect historical emissions and economic capacity.

At the same time, emerging economies such as China and India have become major contributors to global greenhouse gas emissions due to rapid industrialization and economic growth. This development has complicated traditional distinctions between developed and developing countries within climate negotiations. Industrialized nations increasingly argue that major emerging economies must also assume greater responsibility for reducing emissions.

Geopolitical competition among major powers also influences climate diplomacy. The policies of the United States, China, and the European Union play particularly important roles in shaping the direction of global climate governance. Cooperation among these actors is essential for achieving meaningful reductions in global emissions.

For example, diplomatic engagement between the United States and China was instrumental in building momentum for the Paris Agreement. In 2014, both countries announced joint climate commitments that signaled their willingness to cooperate on climate action. This announcement helped create a positive political environment that facilitated the successful negotiation of the Paris Agreement the following year.

However, political shifts within major powers can also create uncertainty for international climate policy. The temporary withdrawal of the United States from the Paris Agreement under the administration of Donald Trump highlighted the vulnerability of international agreements to domestic political changes. Although the United States later rejoined the agreement under Joe Biden, the episode demonstrated how fluctuations in national politics can affect global climate cooperation.

In addition to national governments, non-state actors increasingly influence climate negotiations. Environmental organizations, business groups, scientific institutions, and local governments all play active roles in shaping climate policies and promoting international cooperation. These actors often advocate for stronger climate commitments and help mobilize public support for environmental action.

6. Implementation Challenges

Although the Paris Agreement represents a major diplomatic achievement, its implementation faces numerous challenges that may limit its effectiveness. One of the most significant obstacles is the gap between current national commitments and the emission reductions required to meet the agreement's temperature goals.

Scientific assessments conducted by the Intergovernmental Panel on Climate Change indicate that global greenhouse gas emissions must decline rapidly over the coming decades in order to limit global warming to 1.5 degrees Celsius. However, current national climate commitments are insufficient to achieve this target.

This discrepancy is often referred to as the "emissions gap." Without stronger commitments and faster implementation of climate policies, global temperatures could rise significantly above the targets established by the Paris Agreement. Such an outcome would increase the risk of severe environmental consequences, including more frequent extreme weather events and accelerating sea level rise.

Another major challenge involves the lack of legally binding enforcement mechanisms within the Paris Agreement. Unlike some international treaties that impose penalties for non-compliance, the Paris framework relies primarily on voluntary commitments and diplomatic pressure. While transparency mechanisms encourage accountability, countries cannot be formally punished for failing to meet their climate targets.

Financial constraints also pose significant barriers to effective climate action. Many developing countries lack the financial resources necessary to invest in renewable energy infrastructure, climate adaptation programs, and sustainable development initiatives. Although developed countries have pledged to mobilize billions of dollars in climate finance, the availability and distribution of these funds remain uneven.

Technological limitations represent another challenge. Transitioning from fossil fuels to renewable energy sources requires substantial investments in research, infrastructure, and innovation. While renewable energy technologies such as solar and wind power have become increasingly affordable, large-scale energy transitions still face economic and logistical obstacles.

Social and political resistance can further complicate climate policy implementation. In many countries, industries that depend on fossil fuels exert significant political influence and may oppose policies aimed at reducing carbon emissions. Governments must therefore balance environmental objectives with concerns about economic growth, employment, and energy security.

7. Climate Justice and the Global South

The concept of climate justice has gained increasing prominence in international climate debates. Climate justice emphasizes the ethical and social dimensions of climate change, particularly the unequal distribution of its impacts and responsibilities.

Many countries in the Global South are among the most vulnerable to climate change despite contributing relatively little to global greenhouse gas emissions. Small island states, for example, face existential threats from rising sea levels and increasingly severe storms. Similarly, many developing countries experience heightened risks of drought, food insecurity, and water shortages as a result of changing climate patterns.

These vulnerabilities have led developing countries to demand greater financial and technological support from industrialized nations. Climate finance mechanisms established under the Paris Agreement

aim to address these concerns by providing resources for adaptation and mitigation projects in developing countries.

However, debates over climate finance remain contentious. Developing countries often argue that wealthy nations have not fulfilled their financial commitments, while donor countries emphasize the importance of transparency and accountability in the use of climate funds.

Civil society organizations such as Greenpeace and World Wide Fund for Nature play an important role in advocating for climate justice. These organizations frequently highlight the disproportionate impacts of climate change on vulnerable communities and push governments to adopt more ambitious climate policies.

The concept of loss and damage has also become an important issue within international climate negotiations. Loss and damage refers to the irreversible impacts of climate change that cannot be prevented through mitigation or adaptation measures. Developing countries have increasingly called for financial mechanisms to compensate communities affected by climate-related disasters.

Addressing these concerns is essential for maintaining trust and cooperation within the international climate regime. Without meaningful support for vulnerable countries, global efforts to combat climate change may face significant political resistance.

8. Evaluating the Effectiveness of the Paris Agreement

The effectiveness of the Paris Agreement can be evaluated along multiple dimensions: participation, implementation, transparency, compliance, and influence on global climate governance norms.

8.1 Participation and Inclusiveness

One of the most notable achievements of the Paris Agreement is its nearly universal participation. Almost every UNFCCC member state has signed and ratified the agreement, reflecting a broad global consensus on the need for collective action. This inclusive approach marks a departure from the Kyoto Protocol, which primarily targeted developed countries and faced significant non-participation from major emitters such as the United States.

Inclusiveness is particularly important in addressing a problem as complex and global as climate change. By allowing both developed and developing countries to submit nationally determined contributions (NDCs), the Paris Agreement creates a sense of shared responsibility while acknowledging disparities in historical emissions and economic capabilities.

However, participation does not necessarily guarantee effective action. While nearly all countries have submitted NDCs, the ambition of these commitments varies widely. Many developing countries have pledged ambitious mitigation targets contingent on international financial support, while some major emitters' commitments remain insufficient to meet global temperature goals.

8.2 Implementation and Compliance

The Paris Agreement's reliance on voluntary national commitments presents both opportunities and challenges. On one hand, this flexibility has enabled broader participation and encourages domestic ownership of climate policies. On the other hand, the lack of legally binding enforcement mechanisms means there are no formal penalties for failing to meet commitments.

Technical expert reviews and the transparency framework are intended to ensure accountability. Countries are required to report on their emissions and progress toward NDCs, which are then subject to review by independent experts. While this promotes transparency and international peer pressure, compliance ultimately depends on political will rather than legal enforcement.

Current evidence suggests mixed results in implementation. According to the latest IPCC reports, global emissions continue to rise, and existing NDCs are insufficient to limit warming to the 1.5°C target.¹ This gap between ambition and reality highlights the need for stronger domestic policies, enhanced international cooperation, and more aggressive climate financing.

8.3 Influence on Global Norms

Beyond formal compliance, the Paris Agreement has significantly influenced global norms and expectations around climate action. By framing climate change as a shared global responsibility and emphasizing transparency, inclusivity, and equity, the agreement has shaped the behavior of states, international organizations, and non-state actors.

For instance, multinational corporations and financial institutions have increasingly adopted climate-related targets aligned with the Paris goals, signaling the diffusion of norms beyond the public sector. Similarly, cities, regional governments, and civil society organizations have mobilized to support ambitious climate policies, creating bottom-up pressure for national governments to act.

9. Policy Recommendations

To enhance the effectiveness of global climate governance and ensure the Paris Agreement meets its long-term objectives, several policy recommendations emerge:

1. **Increase Ambition of NDCs:** Countries should revise their NDCs with higher emission reduction targets, particularly major emitters whose policies largely determine global outcomes. These updates should align with the IPCC's recommendations for limiting warming to 1.5°C.
2. **Strengthen Climate Finance:** Developed countries must fulfill and expand financial commitments to support mitigation and adaptation in the Global South. Transparent reporting and equitable allocation mechanisms will increase trust and facilitate more effective climate action.
3. **Enhance Compliance Mechanisms:** While the Paris Agreement relies on voluntary commitments, supplementary mechanisms such as sanctions, incentives, or trade-linked climate policies could strengthen adherence to NDCs.
4. **Promote Technological Transfer:** Facilitating access to renewable energy technologies, climate-resilient infrastructure, and knowledge-sharing can help developing countries implement mitigation and adaptation strategies more effectively.
5. **Integrate Climate Justice:** Policies must address vulnerabilities of marginalized populations and countries most affected by climate change. Loss and damage compensation mechanisms, equitable adaptation strategies, and participation of local stakeholders are essential for sustainable outcomes.
6. **Encourage Non-State Engagement:** Cities, corporations, and NGOs can complement national efforts by implementing climate policies at sub-national and global levels. Formal recognition of these actors within international governance frameworks can enhance accountability and innovation.

10. Future Scenarios for Global Climate Governance

The trajectory of global climate governance depends on the interaction between scientific evidence, political will, economic considerations, and social mobilization. Several potential scenarios illustrate the future of international climate action:

10.1 Optimistic Scenario

- Countries progressively enhance their NDCs.

- Global emissions peak and decline before 2030.
- Financial and technological support flows effectively to vulnerable countries.
- Climate-induced migration and conflict are mitigated through proactive adaptation strategies.

10.2 Moderate Scenario

- Emission reductions occur but fall short of the 1.5°C target.
- Global warming approaches 2°C, causing moderate environmental and social disruptions.
- Cooperation between major powers remains uneven, with occasional setbacks in negotiations.

10.3 Pessimistic Scenario

- Current commitments are insufficient, leading to warming beyond 2°C.
- Climate impacts exacerbate food insecurity, migration, and geopolitical conflicts.
- Global governance mechanisms fail to adapt, resulting in fragmented responses and increased vulnerability.

The first scenario is contingent upon strong political leadership, financial commitment, and technological innovation. Without these factors, moderate or pessimistic outcomes become increasingly likely.

11. Conclusion

The Paris Agreement represents a watershed moment in the evolution of global climate governance. Its inclusive framework, emphasis on nationally determined contributions, and mechanisms for transparency have significantly advanced international climate cooperation.

Despite these achievements, the agreement faces substantial challenges. The voluntary nature of NDCs, insufficient climate finance, geopolitical tensions, and technological and social barriers limit its effectiveness. Moreover, global emissions continue to rise, underscoring the urgent need for stronger policies and enhanced international coordination.

To achieve the long-term goal of limiting global warming, global climate governance must combine ambitious national policies with robust international mechanisms, sustained financial and technological support, and active participation from non-state actors. Integrating the principles of climate justice, equity, and accountability will be essential to maintaining trust and cooperation among states.

Ultimately, the Paris Agreement illustrates both the potential and limitations of global governance in addressing one of the most pressing challenges of the twenty-first century. Its success depends not only on the frameworks it establishes but also on the political will, societal engagement, and innovation of the international community.

References

1. Intergovernmental Panel on Climate Change (IPCC), *Climate Change 2023: Synthesis Report* (Geneva: IPCC, 2023), 45.
2. Robert O. Keohane, *After Hegemony: Cooperation and Discord in the World Political Economy* (Princeton: Princeton University Press, 1984), 101.
3. Daniel Bodansky, *The Art and Craft of International Environmental Law* (Cambridge: Harvard University Press, 2010), 205.
4. John Vogler, *Environmental Politics* (London: Routledge, 2016), 112.
5. Pamela S. Chasek, David L. Downie, and Janet Welsh Brown, *Global Environmental Politics* (New York: Routledge, 2018), 220.
6. Frank Biermann et al., *Earth System Governance* (Cambridge: MIT Press, 2014), 180.

7. Thomas Homer-Dixon, *Environment, Scarcity, and Violence* (Princeton: Princeton University Press, 1999), 58.
8. Jeffrey Sachs, *The Age of Sustainable Development* (New York: Columbia University Press, 2015), 96.
9. Elizabeth DeSombre, *Global Environmental Institutions* (Cambridge: MIT Press, 2024), 134.
10. Keck, Margaret E., and Kathryn Sikkink, *Activists Beyond Borders* (Ithaca: Cornell University Press, 1998), 76.

Bibliography

- Biermann, Frank, et al. *Earth System Governance*. Cambridge: MIT Press, 2014.
- Bodansky, Daniel. *The Art and Craft of International Environmental Law*. Cambridge: Harvard University Press, 2010.
- Chasek, Pamela S., David L. Downie, and Janet Welsh Brown. *Global Environmental Politics*. New York: Routledge, 2018.
- DeSombre, Elizabeth R. *Global Environmental Institutions*. Cambridge: MIT Press, 2024.
- Homer-Dixon, Thomas. *Environment, Scarcity, and Violence*. Princeton: Princeton University Press, 1999.
- IPCC. *Climate Change 2023: Synthesis Report*. Geneva: Intergovernmental Panel on Climate Change, 2023.
- Keck, Margaret E., and Kathryn Sikkink. *Activists Beyond Borders*. Ithaca: Cornell University Press, 1998.
- Keohane, Robert O. *After Hegemony: Cooperation and Discord in the World Political Economy*. Princeton: Princeton University Press, 1984.
- Robbins, Paul, John Hintz, and Sarah A. Moore. *Environment and Society: A Critical Introduction*. 3rd edition. London: Routledge, 2022.
- Sachs, Jeffrey. *The Age of Sustainable Development*. New York: Columbia University Press, 2015.
- Vogler, John. *Environmental Politics*. London: Routledge, 2016.
- Spellman, Frank R. *The Science of Environmental Pollution*. 4th edition. Boca Raton: CRC Press, 2021.
- Falkner, Robert. *International Environmental Politics: From Rio to Copenhagen*. London: Routledge, 2016.
- Gupta, Jouni, et al. *Global Environmental Governance and Politics*. London: Routledge, 2015.
- Brock, Alexandra, et al. *Environmental Security and Global Governance*. New York: Routledge, 2012.
- Brown Weiss, Edith. *Environmental Change and International Law*. Oxford: Oxford University Press, 2013.
- Conca, Ken. *Governing Water: Contentious Transnational Politics and Global Institutions*. Cambridge: MIT Press, 2006.