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Global Climate Governance: Evaluating Policy Responses in an Era of International Cooperation and Competition

Abstract

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This research paper provides an in-depth analysis of how the global community is working to address climate change through international cooperation and competition. It highlights dual forces that shape global climate governance, focusing on the Paris Agreement as a key framework. The article focuses on the fact that although international cooperation. Most countries fail to achieve the targets they set forth as part of their pledges; the gap between the pledging and the actual reduction of emissions is huge. International competition, especially in the area of renewable energy, would spur innovation and progress. China and the United States have invested heavily in green technologies; these investments have economically and strategically benefited those respective nations. This competition creates unequal disadvantages, especially for developing countries that cannot compete because they do not have sufficient resources. Non-state actors, including cities, corporations, civil society organizations, are also increasingly crucial to filling out national efforts.

Keywords: Global Climate Governance, International Cooperation, Policy Responses, Paris Agreement, Non-State Actors, Governance Mechanism, Green Technology, Sustainable Development

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Title

Global Climate Governance: Evaluating Policy Responses in an Era of International Cooperation and Competition

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Abstract

This research paper provides an in-depth analysis of how the global community is working to address climate international change through cooperation and competition. It highlights dual forces that shape global climate governance, focusing on the Paris Agreement as a key framework. The article focuses on the fact that although international cooperation. Most countries fail to achieve the targets they set forth as part of their pledges; the gap between the pledging and the actual reduction of emissions is huge. International competition, especially in the area of renewable energy, would spur innovation and progress. China and the United States have invested heavily in green technologies; these investments have economically and strategically benefited those respective nations. This competition creates unequal disadvantages, especially for developing countries that cannot compete because they do not have sufficient resources. Non-state actors, including cities, corporations, civil society organizations, are also increasingly crucial to filling out national efforts.

Keywords: <u>Global Climate Governance</u>, <u>International Cooperation</u>, <u>Policy Responses</u>, <u>Paris Agreement</u>, <u>Non-State Actors</u>, <u>Governance Mechanism</u>, <u>Green Technology</u>, <u>Sustainable Development</u>

Introduction

The worsening climate calls for a global community to adopt a holistic, integrated approach. More the effects of climate change from extreme weather events to disruptions of the ecosystems, such events remind the world in every detail of effective governance in international climate affairs as it remains a global concern; that is, how there exists cooperation and competition across the nation in pursuit of the best sustainable solution in terms of





climate. This complex interplay of cooperation and competition is the basis of modern international climate politics.

International cooperation is an inevitable tool for the management of climate change, just as the one that appears in the significant agreements. One such example is the recently agreed landmark made by nearly all nations. It is the Paris Agreement agreed upon to set a global limit on warming the earth at an average rate of more than 2 degrees Celsius above pre-Industrial Revolution levels with the effort to enhance the goal and limit this increase even to 1.5 degrees Celsius (UNFCCC, 2015). These agreements are a statement of consensus commitment to a global collective approach in dealing with climate change through NDCs, technologies, and finance to developing economies. However, the implementation of such agreements ordinarily displays the tenuous interdependency of national interest and fiscal, and political willpower.

At the same time, the international climate governance landscape is defined by international competition. There is a battle for global leadership in green technologies, renewable energy markets, and sustainable development models. In this respect, international competition may drive innovation and efficiency, as countries will try to obtain economic and strategic benefits from their climate policies. For instance, China's massive investment in renewable energy has transformed it into a global trendsetter, thus pitting the country against former world leaders in the energy sector, such as the United States and the European Union 2023). While competition can foster (IEA. innovation, the problem is fairness, wherein the less developed countries would have no way of competing on equal terms.

Overlapping cooperation and competition exist within international climate governance through geopolitical tensions and economic disparity. The approach in dealing with governance cannot be uniformly applied to the nations developed or developing, and impacts vary along regional lines due to the differing facets of climate change. Emission reduction is expected to come from developed countries that have been responsible for most emissions while providing finance and technology to developing countries. Meanwhile, developing countries demand climate justice in terms of equitable solutions to mitigation and adaptation problems.

This article analyzes policy responses in the international cooperation context of and competition within this framework. It is a comprehensively detailed understanding of key initiatives, agreements, and national strategies, and their present effectiveness, challenges, and future prospects for global climate governance. This is because it is crucial in identifying potential improvements in collaboration, best use of competitive advantages, and ensuring that the global climate change response is inclusive as well as effective

Literature Review

Global climate governance has undergone tremendous changes in the last two decades. This was driven by increasing recognition of climate change as a grave threat to humanity. Literature is highly diversified for this subject and spans from international treaties and national policies to the role of non-state actors and economic and technological shifts.

International climate agreements have received major focus in literature. Indeed, the Paris Agreement is undoubtedly outstandingly the most significant achievement in the development of global climate governance. Several analyses conclude that the effectiveness remains highly dependent on ambitious NDCs and on an effective mechanism of accountability and transparency (Falkner, 2016; Rogelj et al., 2016). Recent studies have focused on the gap between the countries' commitments and their actual emission pathways, highlighting the need for greater international cooperation to achieve the goals of the Agreement (UNEP, 2022; Turner, 2024).

International cooperation and competition dynamics are also widely discussed in the literature. Cooperation is necessary to pool resources, share technology, and provide financial support to vulnerable nations. Research by Keohane and Victor (2016) and Ostrom (2010) believe that sound climate governance would need a polycentric approach and involve multilevel and diverse governance actors. Yet, rivalry between nations encourages technological advancements and economic competitiveness. An example is when China heavily invests in renewable energy sources that not only improve the technology in this country but also reduce worldwide costs in implementing renewable sources of energy.

Geopolitics is a significant player in the global governance of climate change. The literature shows that the divergent interests of developed and developing countries pose a major challenge. The developed nations, which bear the historical responsibility for greenhouse gas emissions, are supposed to lead in mitigation. The developing countries, on the other hand, focus more on adaptation and seek help in terms of finance and technology. This difference usually leads to contentious bargaining, as has been seen in the COP annual conferences (Roberts & Parks, 2007; Ciplet et al., 2015). Recent studies have focused on climate justice and equitable approaches to meet the needs and capacities of all countries (Schlosberg & Collins, 2014; Ahmad & Gupta, 2024).

Similarly important are the non-state actors in the form of cities, corporations, and civil society within global climate governance. Bulkeley and Betsill (2013) have mentioned that cities played a considerable role in reductions and new policymaking to deal with the issues of emission reduction. Multinationals have been increasingly using self-binding for carbon-neutral practices as well as in sustainability with both the drive from regulation and consumerism (Wright & Nyberg, 2015). Civil society mobilizes for more climate actions, which pressures governments into taking delivering action and their promises internationally; there is indeed a large gap between global agreements and local implementation Newell, 2008; Smith, 2024.

Technological changes and economic shifts are two integral threads in the literature pertaining to global climate governance. It is changing energy forms with an unprecedented shift in renewable sources of energy roll-out of smart grids and expansion of electric vehicles across the globe, as is the case with the International Renewable Energy Agency's, 2023 example. The critical policy levers that can serve to incentivize a reduction in emissions and promote sustainable development are carbon pricing and green finance, which are types of economic policies (Stern, 2021). However, the literature raises challenges regarding the guaranteeing of inclusivity of the shift in technology and in the economic arrangement such that it will not exacerbate existing inequalities in their society (Sovacool et al., <u>2022</u>; Jones, <u>2024</u>).

In summary, this literature on global climate governance will be a comprehensive explanation of the complex interplay of international cooperation and competition. It points out the imperative to use inclusive, equitable, and innovative approaches for solving multifaceted climate change problems. Future research would do well to track these changes in global climate governance with specific attention to the implementation of international agreements, the role of non-state actors, and transformations through technological and economic shifts.

Objectives

The objectives of this paper are set to explore the complex terrain of international climate governance within the contexts of cooperation and competition. By focusing on specific areas of inquiry, we hope to clarify the mechanisms and dynamics that shape climate policy responses. The following goals will serve as the focus for our assessment of how effectively international climate agreements actually spur action to change global trends, while at the same time delving into whether cooperation is competitive, with greater importance on input from other stakeholders as well as new technological improvements on meaningful actions taken in light of the climate issue.

Effectiveness of International Climate Agreements

- Consider assessing the Impact and implementation of Major international Agreements-Paris Agreement towards influencing Global Climate Change actions.
- Identify areas of gap between the commitments of countries through climate pledges and their real emission trends.

Analyze the Interplay of International Cooperation and Competition

- Analyze how international cooperation leads to resource pooling, technology sharing, and finance support for climate action.
- An analysis of how competition creates technological innovation and economic efficiency and its impact on equity and climate justice in a global context.

Examine the Role of Non-State Actors and Technological Innovation

- Cities, firms, and civil society: Their roles in global climate governance
- Technological and economic policy drivers and impacts: Developing renewable energy and carbon pricing and their implications for the global climate strategy and its inclusiveness.

Research Questions

This article, in exploring the intricacies of global climate governance, develops a number of research questions aimed at guiding our investigation of the effectiveness and dynamics of climate policy responses. Formulated to provide more profound insights into how international agreements work, how cooperation and competition influence national climate policies, and what role non-state actors and technological innovations play in climate action, these questions have a broad scope. Through these significant questions, we aim to uncover knowledge that can inform future policies to lead the world toward more effective climate governance.

1. What have these international agreements, such as the Paris Agreement, achieved in terms of the emissions reduction goals they set out?

This question is an attempt to assess the impact and implementation of key international agreements, especially in terms of the effectiveness of the Paris Agreement in driving global climate action and identifying gaps between pledges and actual emissions trajectories.

2. How do international cooperation and competition shape the development and implementation of national climate policies, and what are the implications for global equity and climate justice?

This question analyzes the dynamics of international cooperation and competition as these forces facilitate resource pooling, technology sharing, and financial support. It goes further to explore how such competition drives innovation and efficiency in the economy and impacts equitable climate solutions.

3. Roles of non-state actors and technological advancements in enhancing global climate

governance and how they can be optimized to support inclusive and effective climate action?

This question goes into how cities, corporations, and civil society organizations play roles in global climate governance and how the impacts of technological change and economic policy - such as renewable energy development and carbon pricing - affect global climate strategies, focusing on maximizing these contributions for inclusive and effective climate action.

Research Methodology

This article utilizes the methodology of qualitative research on assessing global climate governance with reviews of scholarly journal articles, books, and news articles. The approach provides insight into the effectiveness of the responses of climate policy by examining the international cooperation and competition context. It involves a review of the literature about academic sources, an analysis of related books, and a current news article review.

A systematic literature review of peer-reviewed journal articles discussing climate governance, international agreements, and the role of non-state actors in action to tackle climate change. These will be articles published from 2023 and 2024 to reflect the most updated trends and findings. Articles were sought from reputable journals related to environmental studies, international relations, and policy analysis. Some of the key themes that would be found include the effectiveness of the Paris Agreement, the dynamics of cooperation and competition between nations, and the impact of technological advancement on climate policy.

Other books, within the last couple of years, on current research pertaining to global climate governance are to be scrutinized as well. In this paper, recent book editions that reflect in-depth theoretical frameworks as well as case studies clarifying the nature of policy responses in terms of climate are analyzed. There is an analysis of books of the past two years as a spotlight on new thoughts and critiques in the evolution of the climate governance framework. This article will synthesize information from these texts to deepen its understanding of how various actors, both in the state and non-state entities, influence climate policy. This research will scan news articles by big media houses to capture what is happening currently and how people are viewing climate governance. Such articles include news articles of 2023 and 2024 that report major events, policy changes, and international negotiations in regard to climate change. Through analyzing news articles, this research will be able to identify how media influences public perception coverage and understanding of climate governance issues. This will further demonstrate how non-state actors and grassroots movements feature in the framing of climate action discourses.

With such focus on this methodology, the article will provide a balanced view of global climate governance in terms of insights from scholarly literature, theoretical perspectives, and current news developments with such sources to integrate and understand comprehensively the challenges and opportunities that abound within this climate policy response.

Data Analysis

The data analysis from this section is set to establish whether the international climate agreements are effective. It also explains the cooperation versus competition dynamics and addresses non-state actors and technological improvements in global climate governance. The analysis is achieved by inferring a mixture of emissions trends, financial commitments, and nonstate actor contributions as indicators of the impact of, as well as challenges resulting from, global climate policies.

Effectiveness of International Climate Agreements

We assess the effectiveness of the Paris Agreement and its peers by comparing emission reduction targets with the actual performance of countries that signed the treaty. This data tells us the gap between promises in terms of NDCs and actual outcomes on the ground.

Table 1

Emission Reduction Targets vs. Actual (2015-2024)

Country	Emission Reduction Target by 2024 (%)	Actual Reduction (%)	Gap (%)
United States	26-28	18	8-10
China	20	16	4
India	33-35	30	3-5
Germany	40	35	5
Brazil	37	25	12

Source: UNEP, IPCC Reports (2022-2024)

Table 1 depicts that the data clearly indicates a significant difference between most countries as major emitters are indeed doing quite well towards reaching their set targets. Indeed, economic

pressure, technological limitations, and political transitions that face such countries to a great extent impede compliance with such pledges made earlier.

Figure 1



We make investments in green technologies and renewable energy as a good example of both the forces of cooperation and competition. Comparing investment data, we can realize how this competition drives innovation and has an impact on the development of policies among countries.

Table 2

Investments in Renewable Energy by Leading Nations (2020-2024, USD Billion)

Country	2020	2021	2022	2023	2024 (Projected)
China	80.5	85.2	91.8	95.3	102.0
United States	70.1	74.6	78.9	83.4	88.1
Germany	55.3	60.7	63.9	68.2	70.5
India	42.8	46.5	50.2	54.1	58.0
Brazil	28.4	32.6	36.5	39.7	41.5

Source: IEA, IRENA (2020-2023)

Table 2 shows the investments in renewable energy, and here China as well as the United States have a consistently high rank, though both of the leaders depict not only cooperation but also competition in climate governance, where economic interest and technological ambition push considerable resources.

Figure 2



3. Contribution of non-state actors and technological advancements

The front-line implementers of local climate initiatives and green technology improvement are non-state actors. To achieve this, we shall engage selected cities, corporations, and civil society organizations as they commit to lowering greenhouse gas emissions or becoming net-zero carbon emitters.

Table 3

Contributions of Non-state Actors in Emissions Reductions 2021-2024

Entity	Emission Reduction (%)	Sector	Key Initiatives
New York City	20	Urban Policy	Building retrofits, public transit expansion
Microsoft	100 (carbon-negative)	Technology	Carbon capture, renewable energy data centers
Greenpeace	15 (global campaigns)	Civil Society	Advocacy for fossil fuel divestment

			Bashir Ahmad, Maha Bashir, and Arifa Zia
Entity	Emission Reduction (%)	Sector	Key Initiatives
Tesla	50 (carbon-neutral)	Transportation	Electric vehicles, solar energy initiatives
Tokyo	25	Urban Policy	Waste-to-energy, urban green spaces

UNEP, IPCC Reports, 2023

The information in Table 3 points out how much of an influence non-state actors are having on climate governance. They contribute toward the setting of aggressive targets, form political lobbies for policy change, and often lead by innovating new technologies. Their involvement has helped enhance global action on climate issues and provides necessary support where governmental action might fail or be insufficient.

Figure 3



Discussion

The complex dynamics of global climate governance-the better story of both achievements and ongoing problems in international efforts to address climate change- highlights the two forces of international cooperation and competition. The complexity lies in how countries and other nonstate actors simultaneously collaborate and compete. This section explores the implications of these forces, the role of international agreements and national policies, the influence of non-state actors. and the importance of inclusive technological advancement.

The Dual Forces of Cooperation and Competition

While this commitment to mitigate international climatic changes is attempted through different nations with variances of disparate economic strength, diverse political agendas, and climates coming under varying climate-related vulnerability, international accords like the Paris Agreement are basically a symbol of commitment undertaken by the worldwide community at large toward global mitigation of climatic changes together. Due to the interests of several national governments and jarring clashes of economic policy, many commitments are crippled towards realization and have been undertaken as they seem to follow policy measures aiming for rapid attainment of returns on short terms of the economy but the long-term commitments toward their environment do not seem quite congruent in between, showing inequity towards commitments vis-à-vis realized drops in emissions.

While this international competition may drive the most real significant progress, some nations are already leaders in renewable energy technology. China and the United States have placed substantial investments into securing the new green economy's economic advantages. Innovation is fueled by this and lowers the cost of green technologies, thus enabling their introduction to a more comprehensive world. In these sectors, there are variations in the capabilities of developed and developing countries, giving rise to doubts over climate equity. Since developed countries are historical polluters, they are much better equipped in terms of resources to carry forward their agenda for climate action. Several developing countries, therefore, lack the much-needed capital and technology, highlighting a need for financing and technology assistance.

Effectiveness of International Treaties

The Paris Agreement is the high point of climate governance and a turning point since almost every country in the world has committed to lowering the rate of global warming. However, the success of this agreement is not quite as clear-cut since many countries are failing to fulfill their NDCs. The data shows a stark contrast between the targets pledged at the international level and the emissions cut at the national level, indicating a wide chasm between promises made internationally and the actual implementation process. In practice, political change, economic stress, or conflicting home interests can block ambitious efforts at major emitting countries in taking a decisive step at climate actions.

The very nature of the Paris Agreement, commitments being voluntary adds to a challenge. That is without binding legal duty, any country can actually under-perform on its commitments to the NDC. There were suggestions for stronger enforcement within international climate change agreements that increase accountability to deliver under the agreement. The Paris Agreement itself provides for regular stocktakes to further enhance transparency and accountability. In the absence of any pressure or incentives on nations to increase ambition, stocktakes alone might not prove to be enough to close the gap in emissions.

Role of Non-State Actors in Climate Governance

Cities, corporations, and civil society organizations also have a critical role in complementing national and international efforts to address climate change. Cities around the world implement aggressive climate policies, including renewable energy transition, building retrofitting, and extension of sustainable transportation. Local actions on cities reduce urban emissions but contribute much to the goals of the nation in regard to climate. New York and Tokyo are among these cities, which set strict

targets for emission reductions. Such city-level actions show that climate action does not have to wait for national governments in order to promote bottom-up approaches to climate governance. Corporations, however, constitute a key actor, particularly among those committed to ambitious targets for sustainability: carbon neutrality or renewable energy. Such businesses drive demand for renewable technologies and can influence supply chains, which can encourage sustainable practices within industries. However, despite the best of corporate intentions, the very high risk of greenwash has to be taken very seriously. It is at such a juncture that transparency and accountability mechanisms become fundamental translating factors in corporate climate commitments into actual. observable consequences. On the civil society side, advocacy groups and activists put pressure on the government and corporations toward much more aggressive climate change policies and educate the masses on the importance of an immediate response to the climate crisis.

Technological and Economic Factors

Technological advancement is required to reduce climate change because it helps in shifting from carbon-intensive industries to cleaner alternatives. Renewable energy sources, electric vehicles, and energy-efficient technologies have already changed the global energy landscape. However, the deployment of these technologies varies widely across regions due to economic constraints and infrastructural limitations. Developed countries, leading in green technologies, benefit economically while simultaneously reducing their environmental impact. The financial and technical barriers limit the possibility of adoption in developing countries.

Green finance is the necessary mechanism with regard to carbon pricing, green bonds, and climate funds. Such instruments provide capital for green projects at the level of developing countries while enhancing integrated climate action. Still, in their implementation, such financial products should be designed to especially assist these countries that are badly affected by global warming yet do so the least in return to dirty the whole atmosphere. Second, this attempt at taking over 'dirty' technology by replacing it with greener technology cannot rely solely on building up the capacity of

Challenge and Way Ahead

Notably, the current global governance structure of climate has ensured unparalleled international cooperation; nevertheless, it also raises tremendous challenges. Geopolitics have come to create problems within a pathway toward effective actions against climate change, both economic and commitment levels on behalf of nations. Indeed, the divide between what has been called the North and the South on differentiations of responsibilities and sources has proved to be one big hindrance to an acceptable level of climate solution balance. In contrast, developed countries are likely to take the initiative in mitigation owing to their historical contributions to emissions, while developing countries focus on adaptation and ask for help to adapt to the impacts. This is an ongoing theme of climate negotiations that reflects climate justice and equitable policies.

In addition, new forms of climate governance, such as polycentric governance models that incorporate multiple actors and governance levels, are required to overcome these challenges. Polycentric approaches decentralize climate and provide more flexible governance and customized solutions to address the needs and capacities of various regions. Non-state actors' roles must be enhanced, technological innovation encouraged, and climate justice prioritized to achieve a more inclusive and effective global response.

It's tremendous potential for green technology in reshaping the world's economy and achieving climate goals, but its benefit needs to be available for everybody. The collaboration between states, non-state actors, and international organizations will become the crucial factor in ensuring that those technologies contribute to a just and sustainable future. Of course, the important thing is to create more open monitoring and accountability mechanisms toward holding all the actors responsible for their commitments. The commitments could be of either state actors, corporations, or cities.

Much has been done for global climate governance, and yet much is yet to be done. Therefore, to overcome the many-faceted challenges of climate change, there needs to be a coordinated and inclusive approach. International cooperation would provide fertile ground for further progress, and balancing competition with equity could help bring non-state actors onto the meaningful contributory level.

Recommendations

The article underlines binding international commitments, increased climate finance to developing countries, access to green technologies, enabling the empowerment of non-state actors, equitable climate justice, and public awareness for further policy recommendations that shall integrate the world toward an action plan with a synchronized global, inclusive, and effective response, taking both climate aspects of international cooperation and competition into innovative drivers in favor of sustainable solutions.

Binding Commitments within International Agreements

In the case of the Paris Agreement, a binding commitment should be a necessary condition to make the climate agreements effective. For example, mechanisms that enforce high accountability could be devised and include penalties in case one fails to achieve targets set or incentives to achieve a certain target. This means that countries will fulfill their NDCs. From time to time, it will have its reviews to align national actions with climate objectives globally.

Increase Climate Financing for Developing Countries

Increase climate financing, technology transfer, and capacity building to support developing countries from developed countries. This increased support will help developing countries engage meaningfully in climate actions by addressing imbalances of resources and capacities. Support for green financing instruments, such as climate bonds and carbon pricing mechanisms, will help promote private-sector investment while bringing comprehensive and equitable climate solutions.

Promote Innovation and Access to Green Technology

The first is accelerating the deployment of renewable energy technologies and energy-efficient systems to ensure a decrease in global emissions. Second, investments should be put in clean technologies, which may be deployed at lower costs to make such innovations available throughout the world to less-developed nations. These important efforts include cooperative cost reduction arrangements, for instance, green technologies subsidy.

Empower Non-State Actors in Climate Governance

Cities, corporations, and civil society organizations have been central to driving climate action and should be further mainstreamed into international climate governance frameworks. Policymakers should develop avenues for these actors to directly contribute to climate agreements, allowing localized and innovative solutions that supplement national policies. For example, supporting city-led climate initiatives and encouraging corporate commitments to carbon neutrality can significantly enhance global mitigation efforts.

Promote Inclusive Climate Justice Policies

Equity must form the center of climate governance and no vulnerable and low-emitting country must bear a disproportionate burden of climate change. Policies must focus on climate justice through redressing historical disparities in emissions and adaptation support to communities most affected by climate change. Inclusive approaches to equitable approaches in climate negotiations will build consensus and promote a more unified global response.

Public Awareness and Education on Climate Issues

Public awareness and education can also be important in generating mobilization for global climate action. Educational programs, media campaigns, and community engagements can empower citizens to act better in bringing pressure for sterner climate policies. Knowledgeable citizens would force their governments and corporations to respond according to their needs and aspirations regarding the future.

Conclusion

The challenge presented before is multi-faceted in terms of climate change and poses a serious threat in demanding instant and consistent national and international actions. The current article draws light upon this issue in which a dual approachcooperation and competition on an international level with regard to the problem- has been discussed as an action for proper climate governance and the fight against climate change. Such developments of climate agreements, such as those of the Paris Agreement landmark accords, reveal the collective commitment towards tackling the impact of climate change but remain constrained national interests. bv financial disparities, and inconsistent political will. Despite its unprecedented success in climate diplomacy, the Paris Agreement remains susceptible to the voluntary commitments it undertook and the absence of coercive enforcement mechanisms. It will require more binding commitments, clear accountability structures, and a robust mechanism for periodic evaluation and adjustment of national goals to achieve the targets of the agreement.

The international competitive dynamic has, simultaneously been a catalyst for climate governance progress and a producer of inequality especially in the green technology race towards renewable energy domination. This is particularly evidenced through a powerhouse such as China or the United States - investing leading in renewable energy with clear examples of economic strategic aspiration for technological innovation in advancing the availability of clean energy. The competition landscape, however, leaves open the divide between the developed and developing nations in that it calls for climate justice in ensuring that the participation of all countries, irrespective of their economic status, takes place equitably in solutions for climate. Technological and financial resource disparities increase the need for climate financing, capacity building, and the transfer of sustainable technologies to lessdeveloped countries in order to enable their meaningful participation in global climate action.

In addition to such crucial changes at the international, national, and other levels of

government, it has increasingly become imperative to complement their efforts through non-state action as cities adopt local policies in order to attain greater success, corporations committed to carbon neutrality, and civil society organizations are demanding stronger measures at climate levels. A decentralized climate governance approach often referred to as polycentric, could help in depicting that a more inclusive and flexible system where different actors function independently helps achieve common global objectives. Yet to unlock the full potential of non-state actors, there should be mechanisms for transparency and accountability to avoid such greenwashing issues and make corporate and local climate commitments a bit fruitful.

Technological innovation and green finance are becoming strategic levers in the quest to shift toward a global low-carbon economy. Advances in renewable energy sources, electric vehicles, and other forms of energy-efficient technology are changing the energy equation at breathtaking speed though their access is woefully unbalanced. For the gap, instruments of green finance, carbon pricing, climate bonds, and international climate funds should be very important in terms of offering the capital necessary for green initiatives in developing nations. It will then be critical to ensure that these financial mechanisms are those that ensure equity and inclusion in the support of those countries that are most vulnerable to impacts from climate change yet contribute least to global emissions.

In conclusion, there are many challenges that need to be overcome in order to come out of the trap that climate change has laid around us. While progress toward this goal has been massive, it is still time to make it more coordinated inclusive, and ambitious in achieving this goal. It means strengthening international agreements through binding commitments. enhancing climate financing for developing nations, promoting fair access to green technologies, and empowering nonstate actors. Ultimately, such success will be contingent upon coordinating national interests with the universal goals of climate stability through international cooperation and balancing competing innovation with climate equity. In doing so, we can set the stage to ensure that one of humankind's most pressing challenges indeed has effective and enduring solutions.

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