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Article

Global climate geopolitical competition and Africa's position

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Abstract: The global climate governance process will have a profound impact on geopolitical relations, and, at the same time, these will determine the direction of cooperation in international climate governance. The European Union and the United States are the most important players in the global governance of climate change, and their competing policy orientations and dynamics have a major impact on trends in this field. In this context, Africa is the region most vulnerable to climate change, and the climate issue in Africa has become one of the frontiers of competition between major powers. Indeed, major powers are increasingly competing in Africa, primarily in the areas of climate leadership, program provision, and capacity building. The study is based on the review of articles and research works regarding the global climate change strategies, especially in AFRICA (2020–2024); it also collected information and statistics from the websites and reports of world banks. In the future, the European Union and Africa should work together to build a new era of strategic partnerships to fight climate change. To do this, they should strengthen their strategic collaboration in global climate governance, look for new ways to work together in old ways, and make their cooperation more effective and efficient.

Keywords: climate change; Africa; European Union; cooperation; America

1. Introduction

The climate crisis will not only cause a series of damages to the Earth's ecosystems. However, it will also pose new challenges to human health, economic and social development, and international relations. In the context of the global move toward a carbon-neutral world, the geopolitical race over climate has gradually moved to the center of the world's political stage.

Since the Biden administration, the US has taken an unprecedented positive stance on climate policy, and the US and the EU have tended to coordinate and cooperate on it, which should give new impetus to the global governance of climate change.

However, the United States and Europe have long had structural differences in climate change-related economic interests, domestic political environments, and diplomatic and security perceptions. Hence, the two sides have apparent differences in climate change governance, objectives, determination, and will, limiting the degree of cooperation between them.

In this context, Africa's climate competitiveness among the major powers will affect the evolution of global geopolitical competition in terms of climate. With the escalation of the climate crisis, Africa's climate has become a significant issue in global geopolitics today. Africa is a continent that needs protection from climate change and help from the international community. Africa is a continent that needs protection from climate change and help from the international community.

Indeed, due to Africa's multiple attributes in global climate governance, there is a great deal of competition and cooperation between the major powers in terms of Africa's climate geo-security, climate geopolitics, climate geo-negotiation, climate geo-economics, etc. EU-Africa cooperation on climate opens up new prospects, challenges, and changes in climate geopolitics (Chenguel and Mansour, 2024; Stephen et al., 2022).

However, little academic research has focused on the differences between American and European policy regarding climate change and, in particular, the position of Africa in the global system (Ana et al., 2023). In addition, much of the research tends to concentrate on specific African countries rather than addressing the continent as a whole. Although international strategies and recommendations are developed with a global perspective in mind, it is crucial to unify efforts across the continent to effectively tackle climate change issues.

Therefore, our contribution is to study the emergence of policies to address climate change, particularly the collaboration between Europe and Africa. Since climate change persists, we will focus on why these policies have failed.

So, what are the differences between American and European policies in terms of climate change? What role does Africa play in the face of climate change, and will Europe-Africa collaboration be able to play an active and positive role in the energy and ecological transition? To answer these questions, we will use a descriptive research methodology based on a literature review, one of the most popular techniques in management research. To do this, we examined relevant articles and websites, paying particular attention to the terms 'political change', 'European and American politics', and 'Africa and climate change'. The paper is structured as follows: Section 2 discusses the research methodology, and part 3 presents the differences between European and US policies to address climate change.

Section 4 discusses Africa's position and, in particular, the level of collaboration between Europe and Africa in tackling climate change. Finally, we present the conclusion and recommendations.

2. Methodology

The research methodology is descriptive and consists of two parts. The literature review is a widely used technique in management research (Denyer and Tranfield, 2006; Kotb et al., 2020; Mansour, 2023; Petticrew and Roberts, 2008). To do this, we analyzed articles on the subject, focusing on the keywords in the article. The search was carried out mainly on the Web of Science (WoS), Science Direct, Springer, and Emerald databases and websites dealing with the subject, such as that of the World Bank (see **Table 1**). Secondly, we studied the reports and websites of various organizations, such as the World Bank. A qualitative method is used in the research, and the research design includes organizing, collecting, and analyzing these data samples to get accurate research results (Khairunnessa et al., 2021).

Table 1. The literature review analysis.

Study	Focus	Objective	Scope	Findings
Lotsmart et al., (2024)	Climate change in Africa: Impacts, adaptation, and policy responses	This work examines current trends, dynamics, policies, and developments in response to climate change in Africa. The contributions generally question the policy response to the climate crisis.	Review	The main conclusions are (i) Various forms and scales of local climate adaptation initiatives exist throughout the continent, including some that operate without government support; when considered collectively, these different instances highlight the crucial roles of community-driven capacity and infrastructure development in successfully adapting to climate change; (ii) There are inconsistencies between the climate commitments made by governments, their stated policies, and the actual effectiveness of their implementations; (iii) A tendency towards over centralization and authoritarian governance often limits or excludes collective participation and hampers the ability of non-governmental and civil society organizations to effectively engage in climate action; And (iv) funding plays a vital role in the success and sustainability of governmental climate initiatives and actions across Africa.
Moussa et al., (2024)	Climate change and economic development in Africa: A systematic review of energy transition modeling research	The authors examine the relationship between climate, energy, and development in Africa by systematically reviewing the current understanding of modeling and projections related to the energy transition. They focus specifically on the balance between socio-economic development and the commitment to reducing greenhouse gas emissions.	Review	The main conclusions are i) Energy transition modeling has emerged as a rapidly expanding field in Africa, with more than 90% of studies published post the Paris Agreement in 2015; ii) the primary aim is to project energy mixes and their related emissions trajectories, with only 10% of the studies also focusing on development outcomes as a central goal; iii) technologies like carbon capture, nuclear energy, and hydrogen are some of the least addressed.
Bedair et al., (2023)	Global Warming Status in the African Continent: Sources, Challenges, Policies and Future Direction	This study aims to analyze the impact of climate change on the agricultural sector, human health, and food security in Africa compared with other continents, assess future projections of change, and highlight the role of African leaders in mitigating and adapting to these effects. To analyze these effects, the authors used artificial intelligence, remote sensing, and high-tech algorithms.	Review	The analysis indicated that the greatest fire hazard was observed in Savannah within tropical and subtropical regions of Africa. Additionally, alterations in precipitation and rising temperatures that enhance evaporation will likely decrease runoff levels and diminish groundwater replenishment, which could adversely impact biodiversity, agriculture, and food security. Importantly, African leaders have contributed positively in recent climate discussions, resulting in promising climate initiatives. It is hoped that these efforts will address the climate crisis throughout the continent.
Lazaro et al., (2023)	What is green finance, after all? – Exploring definitions and their implications under the Brazilian biofuel policy (RenovaBio)	The authors conduct a scientific review of green finance to identify advances, key issues, and policy recommendations. They examine the role of green finance in supporting the development and implementation of biofuel projects in Brazil.	Review	The results indicate that green finance must develop a clear understanding of its criteria and standards to avoid financing non-green initiatives and projects that prioritize economic gains over social and environmental sustainability. This clarity will also help investors more effectively evaluate the risks and opportunities associated with their investments.

Table 1. (*Continued*).

Study	Focus	Objective	Scope	Findings
Ana et al., (2023)	The European Union facing climate change: a window of opportunity for technological development and entrepreneurship	This document examines the environmental commitments made by the European Union on the world stage to verify its involvement and responsibility in environmental policy. A comprehensive analysis of the European Union's environmental policies about other countries has been carried out using a comparative methodological framework for these commitments.	Review	The findings validate the European Union's role in fostering and executing initiatives aimed at addressing climate change and enhancing environmental sustainability, thus creating opportunities for technological innovation and business ventures. Based on the conclusions drawn, future research avenues are suggested, taking into account the present economic and environmental challenges amid an energy crisis and inflation.
Obah-Akpowoghaha et al., (2022)	Climate Change and the African Union's Role in the International System	This article highlights the African Union's involvement in climate change and its disadvantages and advantages. It also makes suggestions for reducing emissions, mainly from mechanical operations. This research paper is based on evidence and situation study reports from African states that academics have assessed.	Review	Research indicates that African nations have been the most adversely affected by climate change compared to other regions, which is attributed to ineffective institutions and a deficiency in technical expertise. In wealthy countries, the focus has been on economic growth through research, whereas in developing nations, dysfunctional institutions have played a role in exacerbating climate change. Consequently, the report emphasizes that climate change involves more than just the actions of state actors and highlights the necessity for strong collaboration among local and international organizations. Therefore, the African Union, as the largest international organization in Africa, should collaborate with other global entities and stakeholders to address climate change. The African Union must enhance its policies and encourage all member states to adopt the mitigation strategies suggested by various organizations to alleviate the current global crisis. Additionally, the African Union should persist in demanding reparations from nations that endanger African lives and ecosystems, and it should actively support international efforts to lower emissions. Ultimately, all African governments should promote and incentivize the planting of additional trees as a means to aid in mitigating climate change.
Abbass et al., (2022)	A review of the global climate change impacts, adaptation, and sustainable mitigation measures	The authors attempt to understand how climate variability affects the sustainability of different sectors worldwide. More specifically, the agricultural sector's vulnerability is a worrying global scenario, as irreversible weather fluctuations threaten sufficient food production and supply. Climate change has also jeopardized the integrity and survival of many species and increased the likelihood of certain food-borne, water-borne, and vector-borne diseases, of which the coronavirus pandemic is a recent example. Climate change is also accelerating the riddle of antimicrobial resistance, another threat to human health due to the increasing incidence of resistant pathogenic infections.	Review	Based on the findings, it is essential for the government to play a role in the nation's long-term growth by ensuring strict accountability of resources and adhering to past regulations aimed at creating innovative climate policies. As a result, prioritizing the mitigation of climate change effects is crucial, and this worldwide challenge demands a collective effort to confront its severe consequences for the sake of global sustainability.

Table 1. (*Continued*).

Study	Focus	Objective	Scope	Findings
Stephen et al., (2022).	The politicisation of climate change attitudes in Europe	Using data from the European Social Survey (ESS), we find that in Western Europe (but not Central and Eastern Europe), there is a link between left-right positioning and attitudes to a climate that cannot be explained by economic egalitarianism or liberal cultural attitudes. This link explains in part, but not entirely, why voters from different party families have different beliefs and concerns about climate change. Green voters are more concerned about the climate than other voters with similar left-wing political identities and values. Voters from the populist-right family and those from the conservative family are less concerned about climate change than their left-right orientations and other political values would suggest.	Review	The extent of party polarization regarding climate change among the general public, as identified in this paper, is significant for political dynamics and policy development. Considering that two-thirds of voters from the Green party attribute climate change primarily or entirely to human actions, while only one-third of voters from the Populist Right share this view, it may be challenging for their elected officials to find common ground on climate initiatives.
Alenda-Demoutiez (2021)	Climate change literacy in Africa: the main role of experiences	The document seeks to understand the factors that shape knowledge of climate change in Africa, including its causes, consequences, and solutions.	Review	The findings highlight the crucial importance of firsthand experiences related to the interconnectedness of various literacy components and the intricate influence of identity and trust in institutions. These factors should play a vital role in encouraging governments to address the challenges posed by climate change.
Jacob et al., (2021)	Influencing climate change attitudes in the United States: A systematic review and meta-analysis	This work synthesizes many experimental studies to discover which interventions are most effective in influencing attitudes toward climate change. The meta-analysis focuses on experimental studies that included a control condition and measured attitudes to climate change among participants in the United States.	Review	The findings show that it's significantly simpler to affect beliefs about climate change than to change support for climate change policies. Sadly, support for policies holds more weight than mere belief, as belief is typically regarded as a secondary factor influencing support for climate initiatives. Even in cases where efforts don't effectively shift beliefs, making a substantial impact on policy support could have significant consequences for those in policymaking positions.

3. The difference between the United States and Europe's face of climate change

As the non-traditional security challenges posed by climate change gradually increase, the global perception of the reality and threat of climate change becomes more evident, and the status of climate change governance in international affairs increases. At the same time, the attention, participation, and competition of the major powers for the benefits of global climate change governance are becoming more intense. From the point of view of gas change policy, the dynamics of political interaction between the US and the EU significantly impact the trend in the global response to gas change.

With the promotion of the 'Green New Deal' and increased investment in the energy transition, as well as active climate diplomacy, the United States and Europe will interact differently in the field of climate change (Jacob et al., 2021). The analysis and evaluation of US-European gas change policies are of significant importance in assessing the future direction of the global gas change governance process.

The US and the EU, as two of the world's largest economies and political powers, have been at the center of the global fight against climate change since the 1980s. They worked together to create the main rules and frameworks for this fight, including the UN Framework Convention on Climate Change (UNFCCC), the Kyoto Protocol, and the Paris Agreement (Ana et al., 2023).

However, there are significant differences between American and European policies on gas processing. Firstly, there are differences in the perception of progress in the global governance of climate change. Indeed, the EU stresses that the GCG framework's goals and methods should be based on scientific studies of climate change. For example, the EU uses scientific assessment reports on climate change, like those from the UN Intergovernmental Panel on Climate Change, to support its calls for global climate and emissions cuts.

The Paris Agreement's objective of 'a global temperature increase of less than 2 ℃ and less than 1.5 ℃ above pre-industrial levels' partly reflects the EU's concept of setting science-based climate targets. At the same time, climate change is recognized as a significant threat by the EU public and society, with the 2019 Eurobarometer survey showing that 91% of people agree that 'climate change is a serious problem for the EU' and 91% agree that 'there is a significant need for environmental legislation in Europe'. With 91% and 83% of people agreeing that 'climate change and other environmental problems affect life and health', it has become 'politically correct' in Europe to continue strengthening the response to climate change. Public opinion, including citizens and NGOs, urges the EU and governments to do more.

Secondly, regarding climate change policy objectives, the EU has been striving to be the 'leader' in climate change since the Kyoto Protocol. Not only has the EU ensured that its international commitments are translated into each Member State's emission reduction responsibilities and detailed energy policy targets, but it has also insisted on being the 'leader' among other countries by setting itself ambitious targets. The EU proposed the '20-20-20' target ahead of the Copenhagen Conference in 2009,

the EU proposed the 2030 target ahead of the Paris Climate Conference in 2015, and the EU took the lead in proposing the 'Building a Carbon Neutral Continent' initiative. The US, on the other hand, is not taking the lead to reduce emissions or proposing emission reduction targets that go beyond the current development trajectory. Instead, it is linking developing countries' responsibilities to the emission reduction targets set by the US.

Under Clinton, the US Senate passed the Byrd-Hagel resolution, opposing the US signing a 'legal instrument that commits only developed countries to reduce their emissions', effectively preventing the US from implementing the Kyoto Protocol. In 2010, the United States pledged in the Cancun agreements to reduce its emissions by '17% by 2020 compared to 2005', but in reality has only reduced its emissions by 1.6% compared to 1990. The commitment made by the United States prior to the Paris Conference to 'reduce emissions by 26% to 28% by 2025 compared to 2005' is also much less ambitious than the EU's target for the same period.

Thirdly, regarding the implementation of climate change policy, the EU is focusing on the implementation of international climate change policies through internal legislation and policy development.

By establishing a commitment to develop and continuously improve the EU's internal directives in the areas of renewable energy, energy efficiency, the carbon emissions trading scheme (ETS), the electricity market and the transport sector, the EU has taken the lead in creating the world's first cost-effective carbon market. The European Commission strives to encourage Member States to develop and continuously improve their national legislation in line with the EU's overall climate and energy objectives to contribute to the implementation of the EU's climate goals and commitments (Stephen et al., 2022). Historically, the emission reduction targets of the Kyoto Protocol and the EU's '20-20-20' targets have been met ahead of schedule. On the other hand, the US has struggled to implement its climate energy targets, and the two Democratic administrations of Clinton and Obama were only able to sign international climate agreements on behalf of the President but struggled to pass national legislation. At the same time, US climate policy has often regressed due to changes in administration. By setting climate goals for specific energy policies, the US only made a set of plans under Obama to support clean energy, a low-carbon energy system, and renewable energy. However, these plans are not being carried out very effectively because of the energy industry's concerns.

Lastly, the EU's climate aid to developing countries far exceeds that of the United States. In fact, prior to the Copenhagen conference in 2009, the EU proposed that developed countries provide an annual grant to developing countries until 2020.

The EU also provided € 100 billion in aid to developing countries and launched its initiative to provide € 15 billion annually. Since then, EU leaders have also continued to call for increased financial support for developing countries to combat climate change. The EU (including the UK) and the European Investment Bank are the most significant contributors of public climate finance to developing countries, providing 27% of public climate finance to developed countries in 2017 and € 23.2 billion in 2019, an increase of 6.9% year-on-year. On the other hand, the US has long emphasized the role of financial markets in facilitating climate finance in developing countries to relieve developed countries of their public aid responsibility and has

provided less of its aid to developing countries. From 2010 to 2012, the US provided just $ 7.5 billion in climate aid, and US public climate finance averaged just $ 2.8 billion a year between 2013 and 2017.

Concerning developing countries' responsibilities, there is still a difference between the US and Europe's positions. The US wants to break down the UNFCCC's "common but differentiated responsibilities" and give more responsibility to developing countries, especially emerging countries, at a time of fast industrialization and development. On the one hand, the EU has shown' developing countries its growing climate commitments.

On the other hand, it has combined climate diplomacy with its development aid policies, partnerships, and free trade agreements to jointly promote increased contributions by developing countries to the fight against climate change. The United States, for its part, has long linked the participation of developing countries in reducing emissions to their emission reductions (Jacob et al., 2021).

As the new industrial revolution speeds up and the global trend toward carbon neutrality grows, especially the shift of economic and social development toward green, low-carbon development, the climate issue in Africa is a matter of both African ownership and great power rivalry (Lazaro et al., 2023).

4. Africa's place and role in the global climate geopolitical competition

The acceleration of global climate governance following the Glasgow conference in 2021 has made the African dimension of climate geopolitics critical.

Firstly, in terms of climate geo-security, Africa is profoundly impacted by the long-term effects of the global climate security deficit, despite its small and slowly increasing share of greenhouse gas emissions in the global context. Since the 21st century, Africa's economic and social development has led to a gradual rise in carbon dioxide emissions. However, Africa remains the most vulnerable continent to the impacts of climate change due to various factors, including its geography and stage of development. Climate change particularly exposes the least developed countries and small island states in Africa to increasing security threats.

In this context, the "State of Africa's Climate 2019," published by the World Meteorological Organization (WMO) in October 2020, indicates that temperatures in Africa are rising faster than the global average. The implications of global warming for the continent are expected to be devastating (Bedair et al., 2023). The WMO has also reported that rising temperatures, higher sea levels, shifting rainfall patterns, and the increased frequency of extreme weather events pose significant threats to the health of African populations, food security, and socio-economic development (Moussa et al., 2024). The security implications arising from the interconnections between water, energy, and food in Africa are becoming increasingly serious.

According to the African Climate Policy Centre (ACPC) of the Economic Commission for Africa (ECA), there is a strong correlation between climate change and changes in GDP in Africa, with each 1 ℃ and 4 ℃ increase in global temperatures projected to reduce the continent's GDP by approximately 2.25% and 12.12%, respectively. The negative effects are particularly severe in West, Central, and East Africa compared to South and North Africa (Lotsmart et al., 2024).

Overall, Africa is highly vulnerable to the combined effects of climate change and environmental degradation. Food security, sustainable water supply, and extreme weather events are major challenges that both Africa and the global community must address. At the 2019 UN Climate Action Summit, African countries urged the UN to declare a global climate emergency, advocating for legally binding climate action plans to enhance support for Africa. This highlights the crucial role of international cooperation in tackling the climate crisis.

Secondly, the vulnerability of Africa's development suggests that African countries have significant potential to lead in climate negotiations while also having major needs in this area. African nations have actively participated in international climate negotiations, transitioning from a lack of a unified position to adopting a common stance in the early stages of global climate discussions, as demonstrated by the decision made at the African Union Summit in 2009. This decision established two solid pillars for climate negotiations among African countries: the African Common Position and the negotiating alliance known as the African Group.

Securing their right to development as developing countries and obtaining additional financial and technical support is a significant concern for African nations. The African Group emphasizes the necessity of agreeing on priority elements for developing countries, particularly loss and damage, response measures, regular reviews of the long-term global goal, and financing. Despite signing the Paris Agreement in 2015, developing countries have yet to reach a consensus on these priority elements.

Since then, national contributions have become a key mechanism for guiding climate change policies. As of now, 52 African countries have submitted their initial national data, with revised national data for 2020 in the process of submission. The African Heads of State and Government Committee on Climate Change was established during the 13th AU Summit in 2009 to coordinate the climate positions of African nations and ensure that Africa presents a unified voice on this issue. At the UN Climate Change Conference in 2016, the African Action Summit (AAS) adopted a declaration aimed at uniting African countries regarding climate change and calling on developed countries to enhance cooperation with Africa by providing concrete and effective support.

Thirdly, Africa has emerged as a significant player and stakeholder in global climate negotiations and the climate governance process. The African Group of Climate Change Negotiators was established during the first Conference of the Parties (COP) to the United Nations Framework Convention on Climate Change (UNFCCC) in 1995. Additionally, the African Adaptation Initiative (AAI) and the African Agriculture Adaptation Initiative (AAA) have become important focal points for African climate adaptation (Abbass et al., 2022). At the Glasgow Climate Change Conference, African leaders continued to advocate for increased attention to the continent's climate needs.

4.1. Africa's orientation in the geopolitical climate competition

Although the African group and African issues have always been one of the hot topics in UN climate negotiations, the vast majority of African countries have long

been in the position of being the 'object' rather than the 'subject' of global governance, even for large African countries, such as South Africa and Nigeria, have limited capacity to implement climate change policies and measures. The primary reason for this is the general absence of economic and material conditions that allow African countries to take the lead.

As the global climate problem worsens and its effects intensify, the issue of global climate governance has moved to the forefront of the world stage. The role of global or regional powers in combating climate change in Africa has become increasingly complex, broader, and more critical. As an object of global climate governance, a participant in climate negotiations, and a hotspot for green and low-carbon investments, Africa's climate problems have become increasingly hot in the geopolitical game of the great powers and have become the focal point of the great powers' climate governance strategies, green economy strategies and soft power strategies.

First, the African group is at the center of all the parties involved in the climate change negotiations. Under the United Nations Framework Convention on Climate Change (UNFCCC), China has long adhered to the principles of common but differentiated responsibilities, South-South cooperation, and the Kyoto Protocol, which require developed countries to lead in reducing emissions (Obah-Akpowoghaha et al., 2022).

Through the Group of 77 and China, the African group has staunchly defended African countries' rights to development.

They have consistently countered pressure from the European Union (EU) and United States (US) coordination group, demanding that developed countries acknowledge their historic responsibility for climate change in Africa. Despite long-standing attempts by the US and the EU to undermine developing country solidarity, the African group has remained steadfast in their commitment to their right to development.

4.2. Coordination of climate negotiating positions between countries

Since the Bali Climate Conference 2007, developed countries have been working to weaken the principle of 'common but differentiated responsibilities' and remove the 'firewall' between developed and developing countries. With the 17th Climate Change Conference in Durban, South Africa, the African group, particularly South Africa, has become an essential target for developed countries. The EU took advantage of the African group's request for financial aid.

At the Durban climate conference, African countries supported a timetable for a unified, legally binding global agreement on emissions reductions. Indeed, critics pointed to the significant emerging developing countries' opposition to an international legal framework for emissions reductions.

Some countries, such as South Africa and Ethiopia, have also been lobbying for the European Union to lead in reducing greenhouse gas emissions, particularly in developing countries.

Darlington, Germany, has been a major player in climate negotiations and is now a member of the European Union's Global Environment Forum (GEF). The Durban

Platform for Enhanced Action (DPAA), the result of developed countries' climate diplomacy with Africa, has contributed to the "firewall" of emissions reductions in "North and South" countries (Obah-Akpowoghaha et al., 2022).

The following Warsaw climate conference emphasized autonomous national contributions (INDCs), which made no distinction between Northern and Southern countries and were enshrined as a legal obligation in the Paris Agreement.

In 2015, the European Union and the United States forged strategic alliances with African, Caribbean, and Pacific Island countries to form the High Ambition Coalition (HAC) at the Paris Climate Conference. This coalition called for further reductions in the target for global temperature increase by the end of the 21st century from 2 degrees Celsius to a target of 1.5 degrees Celsius, demonstrating a powerful sense of unity and collaboration in the fight against climate change.

The Climate Leaders Summit organized by the United States on 22 December 2009 provided an opportunity to take stock of the progress made in reducing greenhouse gas emissions. This progress, resulting from collective efforts and strategic alliances, is a significant achievement in the global fight against climate change. The Climate Leaders Summit organized by the United States on 22 April 2021 welcomed five heads of state, who spoke in the areas of adaptation and resilience. UK and US climate representatives frequently coordinated their positions with the African group at the Glasgow 2021 climate conference to advance the Glasgow outcome document, further motivating and inspiring the global community to continue their efforts in reducing greenhouse gas emissions.

Secondly, green development aid for Africa has become a focal point of multilateral cooperation between major countries. With the deepening of the concepts of combating climate change and sustainable development, green, low-carbon, and clean development has become a global economic trend. The United Nations and the major powers are responsible for promoting green development in African countries.

On the one hand, the major powers have jointly promoted aid for green development within multilateral frameworks such as the United Nations (UN). The United States and the European Union are partnering with South Africa at the Glasgow Climate Conference in 2021 to support financing a green, low-carbon development transition in South Africa and the African region. In April 2021, the World Bank published the World Bank Group Climate Change Action Plan 2021 - 2025, which promotes multilateral financial cooperation for Africa's climate change objectives. Under the UNFCCC's Green Climate Fund (GCF), the EU and the World Bank have already mobilized USD 10 billion, while the European Investment Bank (EIB) has joined forces with the World Bank to finance the AU's Program for Infrastructure Development in Africa (PIDA). This multi-sectorial program covers transport, energy, cross-border waters, and information and communication technologies (ICTs), which aim to promote continental integration by improving regional infrastructure. The program is supported by the United States and other Western countries, the Asian Infrastructure Investment Bank (AIIB), and other international institutions.

On the other hand, Africa has always been at the heart of the external climate change strategies of the United States and Western countries.

The European Union has long focused on climate cooperation with Africa, particularly coordinating African climate positions and cooperating on climate issues

of common interest. At the Africa-EU Summit in 2000, European countries stressed the need to address the climate challenge and combat environmental degradation synergistically in Europe and Africa. In December 2007, the second EU-Africa Summit adopted a joint strategy paper on the 'Africa-EU Strategic Partnership' and made several recommendations for its implementation.

The 'Action Plan 2008–2010' identifies climate change as one of the eight priority areas for cooperation between the two parties. In December 2008, the Africa-EU Ministerial Conference also adopted the 'Africa-EU Declaration on Climate Change,' which sets out the position of both parties on the international climate negotiations and their willingness to cooperate. In March 2020, the EU published the document 'Towards a Comprehensive Strategy with Africa,' which underlines the EU's commitment to climate aid in Africa.

The United States, which is currently focused on tackling the climate crisis, has made Africa an important part of its global climate governance strategy by proposing a Climate Finance Plan (CFP) that is expected to double the amount of public climate finance and cooperation funds provided annually to developing countries by 2024 to promote the reduction of greenhouse gas emissions in these countries. The United States and the West have launched strategies and programs to fill Africa's infrastructure gaps, including in the area of climate change, to hinder the internal and external policies of African countries through aid and economic and trade cooperation. Both the EU-Africa Infrastructure Trust Fund (EU-ITF) and the Pan-Africa Program, financed by the European Union's Development Cooperation Instrument (DCI), aim to facilitate investment by developed countries in infrastructure in sub-Saharan Africa, knowing that the EU-Africa Infrastructure Trust Fund (EU-Africa ITF) is being one of the world's largest funds for infrastructure development in the region.

4.3. Challenges and directions for Africa in the geopolitical competition on climate change

Africa faces significant challenges in the ongoing geopolitical competition regarding climate change. As global powers vie for influence, it is crucial for Africa to assert its role and leverage its unique position. By addressing environmental concerns and advocating for sustainable development, African nations can not only protect their own interests but also contribute to global climate solutions. Emphasizing collaboration, innovation, and resilience will help Africa navigate this complex landscape and emerge as a key player in the fight against climate change.

For example, under the UN Paris Agreement, developed countries are obligated to provide developing countries with $ 100 billion annually in aid through the Global Climate Fund (GCF). However, only about $1 0 billion has been disbursed so far, and funding for climate change adaptation infrastructure in the least developed countries (LDCs) has yet to be allocated.

Developed countries have struggled to effectively support developing nations with climate aid, which is a key issue for many African countries seeking tangible results.

Additionally, climate change has become a tool for geopolitical rivalry, particularly between the United States and Western nations on one side and China on

the other. Western countries are concerned about China's growing influence in Africa and have pledged to counter this through economic cooperation and infrastructure development.

China's 'One Belt and One Road' (OBOR) initiative has been a significant source of influence in Africa, focusing on building infrastructure and establishing a dominant position in the region for several years.

The joint communiqué from a recent summit proposed to 'change the way we invest in infrastructure, including through a Green and Clean Growth Initiative, to build better infrastructure for the world.' The participating countries have agreed to deepen their current partnership and develop a new agreement with Africa.

The United States also introduced the Build Back Better World initiative, aiming to compete with China's One Belt and One Road by emphasizing high standards based on values, particularly in public sectors such as climate change, health, and safety. This initiative underscores the U.S. commitment to leading on environmental values and standards.

During his visit to three African countries in November 2021, U.S. Secretary of State Antony Blinken highlighted the importance of enhancing U.S.-Africa cooperation on climate change and working with Africa to rebuild a more inclusive global economy. The EU has introduced the 'Global Gateway' program as a counterpart to the Belt and Road initiative.

The geopolitical competition over climate issues in Africa has led to a complex trend in South-South climate cooperation. The landscape of global climate governance is evolving from the traditional 'North-South divide' toward a new complexity, with major power competition impacting South-South cooperation on climate change. The 1992 United Nations Framework Convention on Climate Change (UNFCCC) initiated South-South cooperation by mandating developed countries to lead in reducing emissions and to fulfill financial and technological obligations.

The Paris Agreement expanded this framework by including developing countries in the global mitigation effort, stating in Article 3 that 'efforts by all Parties will increase over time'. The 2021 Glasgow Agreement built upon this by establishing rules for the submission of national contributions (NDCs) and setting a timeline for global stocktaking of climate change mitigation, adaptation, and capacity building.

Since the Paris Agreement, the "North-South divide" has narrowed further as the EU, the African Group, the Alliance of Small Island States (AOSIS), and the least developed countries (LDCs) have collaborated over time to advocate for a rigorous global timetable for emissions reductions.

Furthermore, the U.S. and EU have adopted the 'International and National Response to the Climate Crisis' (INC), which is the world's most comprehensive and holistic climate action program, along with the 'Greening Europe' initiative.

Simultaneously, developing countries are exploring their own ecological and low-carbon development paths that suit their national circumstances. China has announced plans to achieve carbon neutrality by 2060, while Brazil has unveiled a green growth program. South Africa has adjusted its emissions target to align with the UN's goal of limiting global warming to 1.5 degrees Celsius, and several other emerging economies are also taking steps to promote greener national economies and societies. However, Global South-South climate cooperation faces challenges,

including differing specific needs among developing countries and pressure from Western nations.

4.4. African countries' strategies for coping with global climate change and geopolitical competition

Africa is home to seventeen out of the twenty countries most vulnerable to climate change. Given this pressing issue, it is imperative for African nations to recalibrate a significant portion of their strategic approaches to effectively engage in the global competition surrounding climate change.

A comprehensive understanding of the current global geopolitical landscape indicates that there is limited opportunity for Africa to assert itself as a significant player. To alter this trajectory, decisive and bold actions are necessary.

The first step is to foster greater political and social unity among African countries (Mansour, 2023). This cohesion will unlock potential, create an environment conducive to progress, and move toward the establishment of cohesive national groups with a shared vision for the future. Regional unions will serve as foundational elements for continental unity. These groups should be based on shared values and goals, like ECOWAS does in West Africa. ECOWAS works to bring about political harmony, cooperative diplomacy, a single currency, industrialization across many regional sectors, and the building of shared infrastructure for energy and communication.

The second priority should be the advancement of science and knowledge. This involves enhancing capacities for foresight and analysis, as well as cultivating vital negotiation skills in engagements with major global powers.

Finally, it is essential to embrace flexibility, adaptability, and resilience when addressing the myriad challenges ahead.

4.5. Case studies: How African countries are addressing climate change challenges

The fight against climate change is actively underway in many African countries. Government climate commitments are essential for ensuring prosperity and preserving vital natural resources like the Nile River, the longest river in the world, and the Congo Rainforest, the second largest rainforest on the planet.

4.5.1. Uganda

In Uganda, floods and droughts lead to the loss of 122,000 hectares of livable and arable land each year. Currently, 41% of Uganda's total land area is affected by extreme weather events such as floods, droughts, and landslides. The primary contributors to climate change are industrialized countries, which directly impact the Ugandan population.

Recognizing this challenge, Uganda has become one of the first countries to develop and launch an interactive monitoring, reporting, and verification (MRV) tool. This innovative tool allows for real-time tracking of the national greenhouse gas (GHG) inventory and enhances data collection by monitoring climate action across various sectors. Notably, it integrates both adaptation and mitigation efforts by closely tracking the targets outlined in Uganda's updated Nationally Determined Contribution (NDC).

Additionally, the tool monitors funding flows for specific climate actions, which is crucial for identifying funding gaps and improving planning and budgeting for NDC implementation. It links Uganda's climate actions to the country's broader sustainable development objectives, underscoring Uganda's commitment to a holistic and integrated approach to climate action and development. This approach aims to enhance the effectiveness of interventions, balance immediate and long-term benefits, and secure funding for measures that provide significant social and environmental advantages.

To further build national capacity, Uganda has conducted hands-on training for 60 representatives from national and local governments, the private sector, and civil society organizations. This training helps participants effectively utilize the tool for climate action and reporting.

4.5.2. Kenya

Climate change is increasingly impacting the lives of citizens and the environment in Kenya. It poses a significant threat to the agricultural sector, with costs projected to reach 2.6% of the country's GDP per year by 2030. In response, Kenya is making efforts to phase out fossil fuels by that same year.

The country has already achieved its initial target of 10% tree cover by 2022 and has revised its ambitions to aim for 30% by 2050.

These initiatives are part of Kenya's broader commitment to enhance its climate goals, which include reducing greenhouse gas emissions and implementing stronger adaptation strategies.

Kenya is now focusing on preserving, regenerating, and expanding its diverse forest ecosystems to address the consequences of decades of deforestation.

Approximately 2 million people who rely on these ecosystems for their livelihood are benefiting from this initiative. Community groups, including schools and forestry associations, are actively involved in tree planting campaigns and the development of communal forest management plans, in partnership with the Kenya Forest Service. This inclusive approach promotes ownership and ensures the sustainability of these efforts.

4.5.3. Somalia

Somalia produces only 0.03% of global greenhouse gas emissions, yet it is among the African countries most severely affected by climate change. To combat this issue, Somalia has set an ambitious goal of reducing its emissions by 30% from business as usual by 2030, contingent upon receiving international public and private support.

In light of limited technical and institutional capacity, the involvement of academic institutions as strategic partners in climate action emerges as a crucial solution. To address this capacity gap, Somalia has partnered with three universities: Moud University, Puntland State University (PSU), and SIMAD University, to implement its National Adaptation Plan (NAP). This collaboration allows the government to leverage the universities' expertise and outsource the development of essential training and awareness-raising activities.

The universities will contribute to the design of a monitoring and evaluation framework, which will include information on data availability, monitoring methodologies, and implementation strategies. They will also provide essential

advisory support in developing and implementing vulnerability assessment methods, which are vital for formulating the national adaptation plan.

As centers of knowledge and oversight partners, these universities can help ensure that the capacity and institutional learning developed continue to be utilized for the nation's long-term climate action. By tapping into available university expertise, Somalia gains access to cutting-edge research and methodologies, enhancing the effectiveness of its climate strategies.

These three African universities have taken the initiative to develop innovative approaches to transparency and partnerships. They aim to involve all segments of society to strengthen efforts in the fight against climate change. Their experiences provide valuable models that other countries around the world can learn from and replicate.

5. Conclusion

With the advancement of the climate change governance process, equitable access to sustainable development has become a common interest and a unanimous principle for all developing countries in the negotiation of the international climate change regime, as well as an important element in its construction.

It is also an essential foundation for a fair and equitable international governance system for global climate governance, based on win-win cooperation. The Paris Agreement is an institutional framework applicable to all countries and always follows the United Nations Framework Convention on Climate Change (after this referred to as the 'UNFCCC').

However, developed and developing countries have "common but differentiated responsibilities". This principle can be seen in areas like mitigation, adaptation, finance, technology, capacity building, and transparency. Developed countries also have more freedom in how they carry out their duties and responsibilities toward developing countries.

For example, on mitigation, the Paris Agreement states that developed countries should continue to lead in striving to achieve absolute economy-wide emission reduction targets.

On the other hand, because each country is different, developing countries should keep stepping up their efforts to reduce emissions by pushing each other to gradually reach their absolute economy-wide emission reduction targets.

The Paris Agreement states that 'developed country Parties should provide funding to assist developing country Parties in both mitigation and adaptation to continue to meet their existing obligations under the Convention'. It proposes that developed countries mobilize at least $ 100 billion annually by 2025 to support developing countries while 'encouraging other Parties to provide such funding voluntarily or to continue to do so'.

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