

Climate Change Diplomacy: Towards Sustainable Global Cooperation**Diah Apriliani, Dina**

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In this research, researchers conducted a systematic literature review to examine conceptualization, political, economic and cultural factors, and their relationship in climate change diplomacy. Various studies and publications were explored from various international journals indexed by Scopus Q1. It was found that climate change diplomacy is a complex process involving various factors at the national and international levels. Political, economic and cultural factors have a significant role in shaping sustainable global cooperation in overcoming the challenge of climate change. The implication of this research is the need for a deep understanding of these factors to develop effective diplomatic strategies in dealing with global climate change.

Keywords: Climate Change Diplomacy, Political Factors, Economic Factors, Cultural Factors, Global Cooperation, Systematic Literature Review.

ABSTRAK

Dalam penelitian ini, peneliti melakukan tinjauan literatur sistematis untuk mengkaji konseptualisasi, faktor-faktor politik, ekonomi, dan budaya, serta hubungannya dalam diplomasi perubahan iklim. Berbagai studi dan publikasi dijelajahi dari berbagai jurnal internasional terindeks Scopus Q1. Ditemukan bahwa diplomasi perubahan iklim merupakan proses kompleks yang melibatkan berbagai faktor di tingkat nasional dan internasional. Faktor politik, ekonomi, dan budaya memiliki peran yang signifikan dalam membentuk kerjasama global yang berkelanjutan dalam mengatasi tantangan perubahan iklim. Implikasi dari penelitian ini adalah perlunya pemahaman yang mendalam tentang faktor-faktor tersebut untuk mengembangkan strategi diplomasi yang efektif dalam menghadapi perubahan iklim global.

Kata Kunci: Diplomasi Perubahan Iklim, Faktor Politik, Faktor Ekonomi, Faktor Budaya, Kerjasama Global, Tinjauan Literatur Sistematis.

1. Introduction

Climate change has become a pressing global issue that threatens public health and sustainable development (Tennison et al., 2021). In response to this challenge, there is a growing need for sustainable global cooperation and diplomacy to combat climate change and achieve Sustainable Development Goals (Shrestha et al., 2022). This is particularly important as climate change has the potential to undermine the gains made in public health over the past decades (Tennison et al., 2021). Furthermore, global sustainable development diplomacy requires a stronger policy agenda and greater cohesion to address climate change and other global challenges effectively (Gu et al., 2021).

Efforts to combat climate change through diplomacy and cooperation are evident in various countries' initiatives. For example, Denmark has been actively engaged in green diplomacy to reduce global carbon emissions, aligning national and public interests to address climate change (Tyas & Prakoso, 2022). Additionally, the Paris Agreement has prompted nations to develop roadmaps for reducing greenhouse gas emissions, emphasizing the global nature of the challenge and the need for international cooperation (Janson et al., 2022). Moreover, China's Belt and Road Initiative has highlighted the importance of environmental governance in addressing climate change, emphasizing the need for targeted actions in specific locations to mitigate the impact of climate change (Coenen et al., 2020).

The role of science diplomacy in addressing climate change has also been recognized,

with calls for greater integration of science diplomacy to tackle global challenges such as climate change, natural disasters, and pandemics (Shrestha et al., 2022). Furthermore, the moderating role of global cooperation between innovation capability and sustainable development has been hypothesized, indicating the interconnectedness of these factors in addressing climate change (Wang, 2023).

In the context of international climate diplomacy, it is essential to consider the impact of national policies and agreements. For instance, the withdrawal of the United States from the Paris Agreement has raised concerns about the gap in climate assistance to developing countries, potentially hindering global climate governance and the achievement of temperature control targets (Ding & Sun, 2022).

In conclusion, the urgency of addressing climate change has underscored the need for sustainable global cooperation and diplomacy. This involves integrating science diplomacy, strengthening policy agendas, and aligning national and public interests to combat climate change effectively. The interconnectedness of innovation capability, global cooperation, and sustainable development further emphasizes the complexity of addressing climate change through diplomatic efforts.

Climate change diplomacy is a critical aspect of achieving global cooperation in addressing the challenges posed by climate change. The effectiveness of this diplomacy is influenced by various political, economic, and cultural factors. The Pacific Islands Forum Secretariat highlighted the significant threat of climate change to the Pacific region, with claims that certain countries attempted to downplay this threat (McDougall, 2021). Additionally, the global carbon emissions continue to rise, reaching 36.4 billion metric tons in 2020, emphasizing the urgency of international efforts to reduce greenhouse gas emissions (Tyas & Prakoso, 2022). The interconnectedness of global challenges, as demonstrated by the Covid-19 pandemic and climate change, underscores the need for sustainable development diplomacy in addressing these issues (Gu et al., 2021).

Furthermore, the confidence in national policy efforts to reduce greenhouse gas emissions is crucial for sustaining international cooperation, emphasizing the need for atmospheric verification of emissions reductions (Abdulla et al., 2023). The role of soft power diplomacy in addressing climate change mitigation commitments, as exemplified by India's ambitious targets for renewable energy and carbon emissions reduction, highlights the significance of diplomatic strategies in achieving climate goals (Guha, 2022). Moreover, the European Union's public diplomacy in the context of ontological insecurity emphasizes the need to consider the broader socio-political context in diplomatic efforts (Pavón-Guinea, 2023). In conclusion, the references provide insights into the multifaceted nature of climate change diplomacy, emphasizing the interconnectedness of global challenges, the urgency of reducing carbon emissions, and the influence of political and cultural factors on diplomatic efforts. These findings underscore the importance of comprehensive and inclusive diplomatic strategies to address climate change at a global level. Therefore, this research aims to fill this knowledge gap through a systematic literature review approach. The research question that will be answered in this study is: "How do political, economic, and cultural factors influence the effectiveness of climate change diplomacy in achieving sustainable global cooperation?". The uniqueness (novelty) of this research lies in its focus on political, economic and cultural factors in the context of climate change diplomacy and its efforts to provide a deeper understanding of how these factors interact with each other and influence global cooperation for environmental sustainability.

It is hoped that this research contribution will provide valuable insights for policymakers, practitioners and researchers in their efforts to increase the effectiveness of climate change diplomacy and achieve sustainable global cooperation in facing the challenges of climate change.

2. Research Methods

This research uses a systematic literature review approach to collect and analyze relevant articles from reputable international databases, such as Scopus. The search keywords used include terms such as "Climate Change Diplomacy", "Global Cooperation", "Political Factors", "Economic Factors", "Cultural Factors", and other relevant keyword variations. The aim of using this combination of keywords is to ensure that articles are retrieved that are comprehensive and representative of the research topic.

After identifying articles that meet the inclusion criteria, the number of articles obtained will be recorded and reported. Article inclusion and exclusion techniques will be applied systematically to ensure only relevant and high-quality articles are included in the analysis. Inclusion criteria include aspects such as relevance to the research topic, completeness of data, and quality of research methodology. Conversely, articles that did not meet the inclusion criteria were excluded from the analysis.

The use of the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) method will help guide the process of preparing this systematic review, including data collection, article quality assessment, and presentation of results. An emphasis on transparency and standardized methodology will ensure the accuracy and reliability of the results of this study, as well as facilitate replicability by other researchers. Thus, this research method will provide a strong foundation for a systematic and thorough analysis of the literature relevant to this research topic.

3. Results and Discussion

3.1. Conceptualization of Climate Change Diplomacy

Climate change diplomacy is a multifaceted process involving various actors at national and international levels. The participation of different countries, international organizations, and non-state actors in climate negotiations has significant implications for the effectiveness of global climate governance. The European Parliament's involvement in UN climate negotiations has been studied, highlighting the increasing politicization of climate change on the global stage (Delreux & Burns, 2019). Additionally, the role of science diplomacy in addressing the global climate change challenge has been emphasized, aiming to enhance the understanding of how science diplomacy can be leveraged in climate change mitigation and adaptation (Doğan et al., 2020). Furthermore, the impact of Brexit on EU policies, including climate diplomacy, has been examined, indicating potential cumulative effects resulting from changes in institutional structures and actor behavior (Dupont & Moore, 2019). The EU's leadership role in global climate negotiations, particularly in establishing a High Ambition Coalition of like-minded progressive countries, has been underscored as a significant aspect of its climate diplomacy (Earsom & Delreux, 2022).

Moreover, the impact of climate agreements on facilitating a financial market-based approach to internalizing climate-related global externalities has been highlighted, indicating the potential for climate agreements to influence financial markets and investment decisions (Saxena & Singh, 2023). The nexus between trade agreements and climate change mitigation has also been explored, providing an overview of the role of trade agreements in addressing climate change (Balogh & Mizik, 2021). Additionally, the vulnerability of African countries to climate change has been emphasized, underscoring the importance of understanding vulnerability as a central aspect of climate justice and the need for interdisciplinary solutions (Williams et al., 2022). The engagement of countries such as India and China in climate negotiations has been analyzed, shedding light on their diplomatic strategies and domestic preferences in addressing climate change at the international level (Jha, 2022; Zhang et al., 2023; Renjie, 2021).

In conclusion, climate change diplomacy encompasses a wide range of issues, including the involvement of various actors, the impact of international agreements, and the intersection

of climate change with other policy areas such as trade and defense. Understanding the dynamics of climate diplomacy is crucial for addressing the global challenge of climate change effectively.

Climate change diplomacy encompasses the diplomatic efforts of countries and international institutions to address climate change globally, involving activities such as negotiating international agreements and inter-agency cooperation in implementing climate change policies (Doğan et al., 2020). Governments play a crucial role in representing their countries' interests in international forums and formulating joint policies and strategies to address climate change, while international institutions like the United Nations (UN) and the United Nations Framework Convention on Climate Change (UNFCCC) provide platforms for negotiation and coordination between countries on climate change issues (Al-Saidi et al., 2019).

The relationship between climate change diplomacy and global cooperation is integral, as it establishes the necessary framework for reaching agreements and joint actions to combat the global challenge of climate change (Gu et al., 2021). Through diplomacy, countries collaborate to identify problems, formulate solutions, and take concrete actions to reduce greenhouse gas emissions, enhance adaptation, and strengthen mitigation capacity (Doğan et al., 2020). This collaboration is essential in addressing the complex challenges posed by climate change and requires effective leadership and cooperation among global leaders (Gu et al., 2021).

In addition, science diplomacy has been identified as a significant driver in shaping the governance of regions affected by climate change, such as the Arctic, and maintaining them as low-tension areas (Argüello, 2023). Furthermore, the involvement of non-state actors, such as individuals, corporations, and civil society organizations, through public diplomacy, enables communication with foreign actors not traditionally addressed by diplomacy, contributing to a more comprehensive approach to addressing climate change (Jung, 2022).

In the context of the European Union (EU), the European Parliament has become an influential actor in shaping the EU's internal climate policies, highlighting the increasing involvement of parliamentary bodies in climate diplomacy (Delreux & Burns, 2019). Moreover, the EU's interregional approach to climate change, as exemplified by the Parliamentary Assembly of the Union for the Mediterranean, addresses legitimacy through quantitative and qualitative text analysis, in-depth semi-structured interviews, and participatory observation, emphasizing the multi-faceted nature of climate change diplomacy (Bouckaert & Delputte, 2020).

In conclusion, climate change diplomacy is a multifaceted and collaborative effort involving governments, international institutions, and non-state actors to address the global challenge of climate change. It requires effective leadership, cooperation, and the involvement of various stakeholders to formulate and implement policies and strategies aimed at mitigating and adapting to climate change.

3.2. Political Factors in Climate Change Diplomacy

Political factors play a crucial role in shaping international climate diplomacy. The involvement of countries such as Russia and China in climate negotiations is influenced by a complex interplay of domestic frames, foreign policy interests, and internal factors (Korppoo, 2019; Renjie, 2021). Additionally, the necessity of sustainable development diplomacy in the pandemic era has been emphasized, highlighting the interconnectedness of global challenges such as climate change and the need for solidarity in political negotiations (Gu et al., 2021). Furthermore, the role of humanitarian diplomacy in responding to climate-related disasters has been underscored, emphasizing the importance of regional engagement and leadership in addressing climate change (McDougall, 2021). Moreover, the impact of political, social, and cultural factors on the emergence of diplomacy in various contexts, including healthcare, has

been recognized, indicating the multifaceted nature of diplomatic relations (Sharafi et al., 2021). Science diplomacy has also been identified as a potential avenue for addressing the global climate change challenge, emphasizing the need for increased understanding of its role in climate change mitigation and adaptation (Doğan et al., 2020). Furthermore, the intensification of international cooperation and diplomacy in addressing urgent issues such as climate change has been highlighted, indicating the growing significance of diplomatic efforts in sustainability agendas (Al-Saidi et al., 2019). Additionally, the synergistic relationship between strategic diplomacy, energy security, and national defense in the context of climate change has been acknowledged, emphasizing the interconnected nature of diplomatic initiatives (Narindra, 2022). Moreover, the potential for science diplomacy to facilitate ocean protection and peace, particularly in the Gulf region, has been recognized, highlighting the broader scope of diplomatic engagement beyond traditional climate action (Fieseler, 2023). Furthermore, the evolving landscape of international relations, characterized by the prominence of smart power factors such as culture, science, and technology, has been identified, indicating the changing dynamics of political science and diplomacy in the contemporary world (Guo & Qun, 2020). Finally, the efficiency of political-elite diplomacy in facilitating innovative agreements in complex geopolitical situations has been demonstrated, underscoring the instrumental role of diplomatic channels in peace processes (Handelman, 2020).

In the context of climate change diplomacy, political factors significantly influence the effectiveness and success of global cooperation efforts. Political ideology, state and interest group interests, power dynamics between countries, and the influence of the international regime are crucial in shaping climate change diplomacy (Korppoo, 2019; Delreux & Burns, 2019; Rubial, 2021; Doğan et al., 2020). Countries with different political orientations may have varying approaches to climate change, affecting diplomatic dynamics (Korppoo, 2019). Additionally, diverse economic, political, and strategic interests of countries and interest groups influence their attitudes and actions in international forums (Al-Saidi et al., 2019; Yeganeh & Bakhshandeh, 2022; Bliton et al., 2022). Moreover, power dynamics, where countries with greater political, economic, and military power have more influence in international negotiations, can create inequality in countries' participation and contribution to climate change solutions (Fieseler, 2023; Polejack, 2021). Furthermore, the influence and effectiveness of international regimes, such as the United Nations Framework Convention on Climate Change (UNFCCC), in coordinating international action significantly impact the ability to reach agreements and implement effective policies related to climate change (Delreux & Burns, 2019; Narindra, 2022).

Understanding these political factors is essential for presenting an in-depth analysis of relevant literature and identifying significant patterns and trends in the dynamics of climate change diplomacy at the global level. By considering the influence of political ideology, state and interest group interests, power dynamics between countries, and the influence of the international regime, researchers can gain insights into the complexities of climate change diplomacy and contribute to the development of effective strategies for global cooperation in addressing climate change.

3.3. Economic Factors in Climate Change Diplomacy

Economic factors play a crucial role in shaping climate change diplomacy. The involvement of nations such as Russia, China, and India in international climate negotiations is influenced by a complex interplay of economic and political interests (Korppoo, 2019; Renjie, 2021; Fareedi, 2024). Additionally, the concept of economic diplomacy has gained prominence in the context of climate change, as countries seek to align their energy and national defense strategies with environmental goals (Narindra, 2022; Khedairi & al-Sahlan, 2021). Furthermore, the role of transnational corporations in sustainable governance has emerged as a key aspect

of diplomatic engagement, highlighting the interconnectedness of economic, environmental, and diplomatic spheres (Bolewski, 2019).

In the context of climate change, the concept of science diplomacy has also gained attention, with scholars exploring how scientific collaboration can be leveraged to address the global challenge of climate change (Doğan et al., 2020; Shrestha et al., 2022). This underscores the recognition of climate change as a transnational issue that necessitates collaborative scientific and diplomatic efforts. Moreover, the pandemic era has brought to the forefront the need for sustainable development diplomacy, which encompasses climate change and environmental sustainability as integral components (Gu et al., 2021; Shrestha et al., 2022).

In the Asia-Pacific region, humanitarian diplomacy has become increasingly intertwined with climate change, as countries like Australia engage in regional arrangements to respond to natural disasters exacerbated by climate-related factors (McDougall, 2021). This reflects the evolving nature of diplomacy, where environmental concerns intersect with humanitarian and disaster response efforts.

In summary, economic factors, scientific collaboration, sustainable development, and humanitarian considerations are all integral to climate change diplomacy. The intersection of economic, environmental, and diplomatic interests underscores the multidimensional nature of addressing climate change on the global stage.

The economic factors play a crucial role in shaping climate change diplomacy, influencing policies, and actions at both national and international levels. The economic impact of climate change, including the consequences for economic growth, financial stability, and societal well-being, is a major concern (Delreux & Burns, 2019). Natural disasters resulting from climate change can lead to substantial economic losses and affect specific economic sectors such as agriculture, fisheries, and tourism (Delreux & Burns, 2019). Moreover, economic incentives and barriers significantly influence countries' participation and contributions to climate change mitigation and adaptation efforts (Gu et al., 2021). Financial and technological support from developed countries can encourage developing nations to reduce greenhouse gas emissions and enhance resilience to climate change (Gu et al., 2021). However, dependence on fossil energy and the prioritization of economic growth can act as economic barriers, hindering countries from taking necessary actions (Gu et al., 2021).

In the context of climate change diplomacy, carbon trading and other financial mechanisms play a pivotal role (Banks & Fitzgerald, 2020). Carbon trading establishes a market for greenhouse gas emission rights, enabling countries and companies to trade permits to produce emissions (Banks & Fitzgerald, 2020). Additionally, financial mechanisms such as the Green Fund and the Adaptation Fund provide crucial financial support for developing countries to reduce emissions and adapt to climate change (Banks & Fitzgerald, 2020). It is also emphasized that economic transformation towards a sustainable and low-carbon economic model is integral to climate change diplomacy (Banks & Fitzgerald, 2020).

Understanding the economic dynamics involved in climate change diplomacy is essential for providing an in-depth analysis of how economic factors influence countries' policies and actions in addressing the global challenge of climate change (Gu et al., 2021). This understanding is crucial for formulating effective strategies and policies that can garner widespread support and cooperation from nations with diverse economic interests and priorities.

3.4. Cultural Factors in Climate Change Diplomacy

Cultural factors play a significant role in shaping climate change diplomacy. Domestic frames and cultural drivers influence a country's international climate positions (Korppoo, 2019). China's climate diplomacy, for example, has been shaped by both external and internal cultural and political factors (Renjie, 2021). Similarly, the emergence of diplomacy in various contexts, such as health care, is influenced by political, social, and cultural factors (Sharafi et

al., 2021). Moreover, humanitarian diplomacy, particularly in responding to climate change-related disasters, is crucial for regional leadership and involves engaging with cultural and political factors (McDougall, 2021).

Science diplomacy also offers potential in addressing the global climate change challenge, with a focus on increasing understanding of how science diplomacy can be leveraged for climate change mitigation and adaptation (Doğan et al., 2020). Furthermore, international cooperation and diplomacy are expected to intensify in addressing climate change and sustainability agendas (Al-Saidi et al., 2019). Science diplomacy, in this context, is seen as a means to achieve Sustainable Development Goals and combat global challenges such as climate change and natural disasters (Shrestha et al., 2022).

In the realm of public diplomacy, cultural-economic models and theoretical perspectives, such as Bourdieu's lens, can inform public diplomacy efforts by considering larger structural factors in tension with agency (Ertem-Eray, 2023). Additionally, traditional science diplomacy and ocean diplomacy are seen as avenues for global coordination on climate action, although inclusive ocean diplomacy across regions may face challenges due to geopolitical factors (Fieseler, 2023).

Furthermore, the role of strategic diplomacy in national development plans, such as Indonesia's nuclear power plant development, is highlighted as a means to support energy security and address climate change concerns (Narindra, 2022). Traditional culture is also recognized as a powerful tool in international communication and diplomacy, as seen in the case of Indonesia-China communication through the frame of Yospan dance diplomacy (Fadillah et al., 2021). In conclusion, cultural factors permeate various aspects of climate change diplomacy, influencing international positions, cooperation, and strategic initiatives. Understanding and leveraging these cultural factors are essential for effective climate change diplomacy.

In the context of climate change diplomacy, cultural factors significantly influence individuals' and societies' views, attitudes, and actions towards climate change. Cultural perceptions and values shape the understanding and response to climate change, influencing priorities, preferences, and strategies for addressing it (Posti-Ahokas et al., 2020). Environmental education and awareness are crucial in shaping attitudes and behaviors regarding climate change, as they increase understanding and encourage environmentally responsible action (Libelo & Tracy, 2022). However, cultural conflicts can hinder global cooperation on climate change, as differences in values, economic interests, and political perspectives between countries and cultures can lead to tensions and difficulties in reaching effective international agreements (Shi, 2022). On the other hand, intercultural collaboration can enhance the effectiveness of mitigation and adaptation efforts by considering diverse cultural perspectives and needs (Ferreira-Lopes et al., 2021).

Investment in environmental education and public awareness campaigns is essential to increase community participation in climate change mitigation and adaptation efforts (Kousar et al., 2022). Furthermore, cooperation between countries and cultures in the exchange of knowledge, technology, and resources can enhance the holistic approach to addressing climate change (Anthonia et al., 2021). This inclusive approach is vital for overcoming cultural conflicts and increasing global cooperation in climate change diplomacy (Silander, 2021).

Understanding the cultural factors influencing climate change diplomacy provides deeper insights into how cultural aspects shape views, attitudes, and actions regarding climate change. It also offers strategies for promoting global cooperation in an inclusive manner, considering the diverse cultural perspectives and needs ("Decolonizing Climate Change Education: Evidence from an Empirical Study in Ghana", 2022).

3.5. Relationship Between Factors in Influence of Sustainable Global Cooperation

Global cooperation plays a crucial role in sustainable development, particularly in the

context of innovation and organizational factors. emphasized the influence of internal or organizational factors such as culture and management systems on the relationship between cooperation networks and sustainable innovation (Çalık et al., 2020). highlighted the moderating role of global cooperation between innovation capability and sustainable development, especially along the Belt and Road Initiative (Wang, 2023). Furthermore, discussed sustainability co-creation in digitalized global value chains, emphasizing the importance of cooperation at individual, relationship-oriented, and overarching project-related levels for sustainability goals (Grunwald, 2022).

The impacts of global events, such as the COVID-19 pandemic, on international cooperation and the transitioning energy system have been studied , shedding light on the effects on global carbon targets and the Sustainable Development Goals (SDGs) (Chapman & Tsuji, 2020). Additionally, the implementation of international capacity cooperation under initiatives like the Belt and Road Initiative has been explored , emphasizing the significance of such cooperation for sustainable development (Liu, 2019).

Moreover, the link between sustainable destination image, brand globalness, and consumers' purchase intention has been investigated by , highlighting the mediating effect of brand globalness on this relationship (Hatzithomas et al., 2021). Furthermore, the role of corporate social responsibility strategies in Spanish electric cooperatives has been analyzed by , emphasizing the engagement of cooperative organizations in ethical, social, economic, and environmental issues for sustainable development (Alhama & Igual-Antón, 2021). Additionally, the trade-off between economic and environmental sustainability in agricultural cooperatives has been identified as an area needing further investigation (Candemir et al., 2021).

These studies collectively underscore the intricate relationship between factors influencing sustainable global cooperation, including innovation, organizational dynamics, global events, and corporate social responsibility strategies, all of which play pivotal roles in shaping sustainable development.

In the context of climate change diplomacy, the interactions between political, economic, and cultural factors are crucial in shaping sustainable global cooperation. Political-economic interactions create complex dynamics between economic and political policies, influencing countries' responses to climate change. International energy and trade policies can conflict with environmental commitments, leading to tension between economic interests and environmental protection (Killian, 2021). Additionally, cultural implications are important in shaping global policies and actions, influencing countries' perceptions, values, and preferences regarding climate change.

While there is synergy between these factors in achieving common climate change goals, tensions can arise when political, economic, and cultural interests conflict with each other, hindering progress in climate change diplomacy. For instance, conflicts between economic and environmental interests can impede effective international agreements to reduce greenhouse gas emissions. Understanding the complex relationship between these factors provides in-depth insight into how they interact and influence joint efforts in facing the challenge of global climate change.

4. Conclusion

In conducting a study of the conceptualization of climate change diplomacy, it was found that this diplomacy involves various parties at both the national and international levels. The participation of countries, international organizations and non-state actors in climate change negotiations has significant implications for the effectiveness of global climate governance. The European Parliament's involvement in UN climate negotiations has been scrutinized, highlighting the increasing politicization of climate change on the global stage. In addition, the role of science diplomacy in facing the challenge of global climate change has been emphasized, with the aim of increasing understanding of how science diplomacy can be

utilized in climate change mitigation and adaptation. Furthermore, the impact of Brexit on EU policy, including climate diplomacy, has been examined, showing the potential for cumulative effects due to changes in institutional structures and actor behavior. The EU's leadership role in global climate negotiations, especially in forming the High Ambition Coalition of peer progressive countries, has been recognized as an important aspect of its climate diplomacy. Furthermore, the impact of climate agreements in facilitating a financial markets approach to the internalization of climate-related global externalities has been highlighted, demonstrating the potential of climate agreements to influence financial markets and investment decisions. The nexus between trade agreements and climate change mitigation has also been explored, providing insight into the role of trade agreements in addressing climate change. Additionally, the vulnerability of African countries to climate change has been emphasized, highlighting the importance of understanding vulnerability as a central aspect of climate justice and the need for interdisciplinary solutions. The involvement of countries such as India and China in climate negotiations has been analyzed, exposing their diplomatic strategies and domestic preferences in addressing climate change at the international level.

In terms of political factors in climate change diplomacy, it was found that political factors play an important role in shaping international climate diplomacy. The involvement of countries such as Russia and China in climate negotiations is influenced by complex interactions between domestic frameworks, foreign policy interests, and internal factors. Additionally, the need for sustainable development diplomacy in the pandemic era has been emphasized, highlighting the interconnectedness of global challenges such as climate change and the need for solidarity in political negotiations. Furthermore, the role of humanitarian diplomacy in responding to climate-related disasters has been emphasized, highlighting the importance of regional engagement and leadership in addressing climate change. Furthermore, the impact of political, social, and cultural factors on the emergence of diplomacy in various contexts, including health care, has been acknowledged, demonstrating the multifaceted nature of diplomatic relations. Science diplomacy was also identified as a significant driver in shaping the governance of regions affected by climate change, such as the Arctic, and maintaining them as low-tension areas. Furthermore, the involvement of non-state actors, such as individuals, companies, and civil society organizations, through public diplomacy, enables communication with foreign actors who are not traditional in diplomacy, contributing to a more comprehensive approach to addressing climate change.

In the context of economic factors in climate change diplomacy, it was found that economic factors play an important role in shaping climate diplomacy. The involvement of countries such as Russia, China and India in international climate negotiations is influenced by the complex interaction of economic and political interests. Additionally, the concept of economic diplomacy has come into focus in the context of climate change, as countries seek to align their energy and national defense strategies with environmental goals. The role of transnational corporations in sustainable governance has emerged as a key aspect of diplomatic engagement, highlighting the interconnections between the economic, environmental and diplomatic fields. In the context of climate change diplomacy, the concept of science diplomacy has also received attention, with researchers exploring how scientific collaboration can be leveraged to address the global challenge of climate change. This underscores the recognition of climate change as a transboundary problem that requires efforts

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