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Building a Sustainable Future through Climate Diplomacy: International Engagement for Environmental Commitment

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Abstract

Climate diplomacy has a long history of pledge implementation gap, even with the UNFCCC, Kyoto and Paris frameworks aggravated by North-South equity issues. This research aims to assess the effectiveness of international climate diplomacy in fostering shared environmental commitment by taking into account national interests, as an example of Jordan. It uses a qualitative-descriptive, interpretivist design which studies treaties, policy documents, IPCC/World Bank reports, and MENA, and thematic codes and context (climate model) (PRECIS). The findings demonstrate that those diplomatic initiatives allow the dissemination of norms (CBDR-RC) and normalizing reporting and NDCs; however, the experience of actually delivering on these commitments is limited due to the lack of water, refugee flows, and the reliance on fossil energy. Improvements in this field depend on the predictable financing, technology transfer, capacity building, and the establishment of a multilevel partnership, such as the multilevel diplomacy at the city level. Recommendations would thus involve the possibility of tying the review cycles with financial and technological processes, ensuring that the regional water-energy collaboration is not politicized, and increasing the involvement of subnational actors. In order to work out the national channels to implement the global commitments into concrete steps and on-the-ground actions, the alignment of the normative frameworks with the facilitating resources is essential. The study aligns with Jordan's updated Nationally Determined Contribution (2022), which targets a 31% reduction in greenhouse gas emissions by 2030, and reflects national strategies under the Economic Modernization Vision (2022) and National Climate Change Policy 2020–2050. The study also highlights the Al-Munther Al-Monakhi Initiative, which was initiated by the author as a volunteer project at COP29, as an example of community-based intervention, which maintains a climate action initiative through volunteerism and civic participation. The initiative builds climate awareness - especially among the media professionals - and turns global commitments into the practical action that is people-focused and helps Jordan build national resilience objectives.

Keywords: climate diplomacy; Jordan; CBDR-RC; Paris Agreement; multilevel governance.

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1. Introduction

Climate change has emerged as a global and one of the biggest challenges in the twenty-first century, with national boundaries being overshadowed, and being an existential of the survival of man. The systematic warming of the world, polar ice melt like never before to date, the escalating frequency of extreme weather patterns, the sharp loss of biodiversity, and erosion of the ecosystems have gone beyond hypothetical dangers and manifested as realities. The crises mentioned above highlight the fact that environmental conservation is not possible with national policies in isolation, but it is a coordinated global strategy. In that sense, diplomacy plays a central role in working as not only a political or legal tool, but as a bridge-building tool within a range of national interests. Climate diplomacy represents the next generation dream of integrating the urgent global sustainability need and the conflicting aspirations of economic and security growth and state sovereignty. The question that lingers is how countries can work together to protect a sustainable future by engaging in diplomacy, whilst treading the lines of their political, social and economic differences.

The objective and scope of climate diplomacy have gradually increased since the signing of the United Nations Framework Convention on Climate Change (UNFCCC) in 1992. Seeking institutionalization of global climate governance, this treaty was followed by another one, the Kyoto Protocol (1997), and the Paris Agreement (2015). Although these frameworks legitimized the postulate of shared yet differentiated roles and relative capacity, they also exposed deep rifts between developed and developing states (Neufeld, 2019). Historically, the developed countries have borne a larger burden of greenhouse gas emissions and are faced with a more pressing demand to make greater commitments towards climate change; at the same time, developing and emerging economies are demanding their developmental rights and the need to eliminate poverty. The Paris Agreement expresses a commitment to ensure that global warming does not exceed 2°C, and even at 1.5°C; however, the emission trajectory is still on an increasing pattern all over the world. This introduction of policy intent and reality on the ground demonstrates the deeply ironic nature of climate diplomacy: on the one hand, however, it is very strong, as it is capable of bringing the states together around a common cause, and on the other, it is very weak, as it shows inertia which prevents effective compliance (Harvey, 2019).

The disparity between the North and the South is one of the main aspects of the current international climate negotiations. The third world usually notes that they are the ones who suffer the ramifications of the crisis, for which they had minimal contribution, whereas the developed countries argue that without a binding cut by the emerging economies such as China, India, and Brazil, the world will not achieve its temperature targets (Sengupta & Friedman, 2019). In fact, according to the estimates of the International Energy Agency (IEA), developing states will make up over 60 per cent of the world's primary energy consumption and two-thirds of all the increase in greenhouse gas emissions during 2000-2030 (Urevig, 2019). This change poses a challenge to traditional responsibility accounts and creates an equity-in and justice-out issue in climate diplomacy. The idea of "ecological debt", which has been promoted by developing countries since ancient times, is the condensation of the demand to have what has been thought to be the untenable directions towards sustainable development: the financial compensation and the technology transfer (Delgado, 2019). These discussions demonstrate the fact that climate diplomacy is not only a response to environmental threats but also a restructuring of more general patterns of international relations and geopolitical balances.

The problem of how to reconcile national interests with environmental commitment is made more complicated by the fact that there are transitional economies and the exemptions established by the international agreements. As an example, when countries under a transition to economic development, such as Russia, were first awarded soft stabilization goals, they currently rank among the top emitters in the world (Kuwonu, 2020). The emerging economies, which previously sought exemptions, have changed to industrialized powers that are currently a source of major contributors to anthropogenic global warming. This change creates fundamental dilemmas such as whether the principle of common yet differentiated responsibilities is to be maintained in bygone and inactive ways or to conform to realities

on the ground, which have real emissions and real capabilities and would incorporate new categories. The questions shine a light on the conflicts which climate diplomacy has to balance between as it tries to make peace with the demands of fair play and those of emergency action for conservation of the environment.

The worldwide statistical data can also explain the proportion of the issue. The Intergovernmental Panel on Climate Change (IPCC, 2023) argues that limiting the temperature rise to 1.5 °C requires sudden and widespread changes in the energy industry, land-use, and industry. However, the United Nations Development Program (2019) warned that a significant number of developing countries would continue releasing large amounts of greenhouse gases by 2020 that are exceeding the levels of a number of industrialized countries. The severity of the case is further enhanced by the occurrence of extreme weather effects: the 2017 season of North Atlantic hurricanes had the highest cost in history, and average global temperatures have never been as high as they were within the past five years (UN SDSN, 2019). The above-presented data reveal the unsuitability of current solutions and the divergence of the gap between the promises and their delivery. As a result, the efforts of diplomacy should be enhanced, not only as a negotiation venue but also as a means of holding the parties responsible, creating more transparency, and making them stick to the rules.

In addition to interstate negotiations, other actors are exerting more influence over climate diplomacy. Researchers highlight the emergence of so-called city diplomacy, when cities and local authorities start creating their own agreements and networks to respond to the threats of climate change (Liapi, 2010). Cities are the locations of population and consumption that generate a substantial number of emissions, and yet, they can be forward-looking and implement sustainable practices faster than states. The World Economic Forum (2019) has identified that cities are becoming part of the global climate governance, meaning that effective diplomacy should incorporate subnational and non-state actors. Such a broadening of climate diplomacy to the costs of more novel forms of state structure makes it more effective, yet also complex, as coordination between different levels of governance becomes necessary (Addaney, 2019).

These dynamics can be explored using the case of Jordan. Jordan has attempted to become a regional environmental diplomacy leader although it has very few resources. According to its Updated Nationally Determined Contribution (2022), Jordan has committed to reducing its carbon emissions by 31% by 2030, which includes 5% unconditional reduction by domestic policy and a 26% conditional reduction subject to international assistance. This two-sided approach presupposes the issues that most of the developing nations have to manage, balancing the national development requirements and the international demands and relying on foreign aid. The success of Jordan in the area of solid waste management, pollution prevention and regional cooperation accentuates the opportunities and constraints of smaller states in influencing the global climate regulation.

Nevertheless, even though there is a huge body of literature on environmental diplomacy, there are still many gaps. Although there are abundant studies on the broad relationship between international relations and the environmental problem (Johnson et al., 2015; Robertua, 2016), the study on how climate diplomacy, in particular, is a process of enabling a collective commitment and conflict of interest among the states has not been done extensively. Besides, nothing much has been made concerning the experience of the small states like Jordan, whose contribution, albeit small, provides a basic idea of inclusivity and effectiveness of international climate control. This study is thus an attempt to close these gaps by analyzing the ways in which climate diplomacy could be enhanced in such a way as to balance the interests of the nations with the objectives of national sustainability and global climate sustainability.

Overall, this study seeks to critically explore the role of international climate diplomacy in promoting collective environmental commitment among states and to solve the situational problems of different national interests. It will also delve into the idea of how the international mechanisms of engagement, which may include multilateral negotiations, treaties and partnerships, can be strengthened to create a sustainable future through effective climate diplomacy. The research adds to current literature by providing a more specific analysis of climate diplomacy as a political and legal structure, as well as

placing Jordan within the framework of a developing country that manages these processes. In this way, it will aim at promoting theoretical and practical insights regarding how global collaboration on the issue of climate change could be rendered more efficient, inclusive and accountable to the pressing needs of the twenty-first century.

Besides official diplomacy, there has been the emergence of community-based climate action in Jordan. One of them is the Al-Munther Al-Monakhi Initiative, which was voluntarily launched by the author at COP29 and intends to maintain climate involvement beyond project funding. The project enables media practitioners and societies to address climate concerns in a manner that is easy to understand, which strengthens the vision of the climate in Jordan by including the people and making it people-oriented.

1.1 Problem Statement

Climate change is one of the 21st-century global problems that poses threats to ecosystems, human security, and economic stability. According to the UNFCCC, Kyoto Protocol, and Paris Agreement, the discrepancy between the promises and the real achievements in the reduction of greenhouse gas emissions remains open regardless of decades of talks (Harvey, 2019; Neufeld, 2019). The developed and developing countries are at a crossroads: the former is under pressure to play a bigger role, and the latter reminds of its right to develop and requests financial and technological resources (Delgado, 2019). This contradiction limits the efficacy of climate diplomacy, and it is questionable how states can address the matter of national priorities and the national sustainability urgency at the same time.

Even though the existing literature on environmental diplomacy covers the subject in general, the need to analyze climate diplomacy as a particular context that promotes a shared commitment despite the divergent interests of states has not been adequately addressed (Johnson et al., 2015; Robertua, 2016). Moreover, the contribution of smaller states, including Jordan, is overridden in the world climate governance discourse, even though they have a role to play and lead the region on the issue.

The study aims to fill these gaps by focusing on the possibilities of overcoming these national interests and common sustainability goals and enhancing multilateral mechanisms, such as negotiations, treaties, and partnerships, to create a sustainable future (IPCC, 2023; Jordan's NDC, 2022).

2. Literature Review

As an international system of complex interdependence, asymmetrical vulnerabilities, and actor constellations, climate diplomacy has developed as one of the main avenues to match national interests with collective environmental commitments. In essence, climate diplomacy bridges the general issue of environmental diplomacy and the need to safeguard the biophysical environment to the tangible institutions, agreements, and practices that regulate climate action (Lundborg, 2018). However, the issue structure of climate change, namely diverse causality, cross-border externalities, and disproportional exposure, makes it more difficult to assign blame and to establish binding regulations (Pillay & Fitchett, 2019). The idea of historical responsibility and the right to development have not been resolved yet, particularly in the scenario where the role of non-state actors, such as those of cities and firms, as well as those of epistemic communities, are not overlooked in addition to non-state actors, which are not in practice unitary actors (Coffel and Radley, 2017; Kamali & Jönsson, 2019).

International relations theoretical lenses can explain why climate diplomacy is progressing in certain fields and stagnating in others. The realists emphasize the role of resource scarcity and security dilemmas as the sources of instability and present environmental degradation as one of the conflict drivers (Hirst, 2018; Kheyrian, 2019). Institutionalists focus on the ways in which regimes, rules, and monitoring reduce the transaction costs and organize cooperation (Ghumman & Horney, 2016; Oberthür & Groen, 2017). Liberal views analyze how the mobilization of the transnational networks and private interests in climate solutions can be mobilized, constructivists follow the process of the reforms of the preferences and behavior by the norms such as climate justice, and critical structuralists ask questions about the inequities reproduced by global governance (Zaree et al., 2016). This intellectual pluralism is not a liability but an

asset: as in the case of biodiversity in the ecosystem, intellectual diversity reinforces adaptive governance in the uncertainty (Lundborg, 2018).

The Paris Accord can be seen as a diplomatic accomplishment, which implies some phases of repetitive vowing and assessment that ratchet aspiration and offer maneuvering to national circumstances (Climate Diplomacy, 2020). They also expect diplomats to negotiate targets as well as enable partnerships, resilient societies, and market tools like carbon markets that are used to spread low-carbon technologies (Oberthür & Groen, 2017). Nevertheless, the systemic issues, e.g., the absence of ambition, the lack of geopolitical cooperation, the lack of implementation, etc., are repeated regardless of all the evidence about climate risks (Climate Home News, 2020; Council of the EU, 2020). These inconsistencies are particularly acute in the case of developing nations, where there is a collision of vulnerability, capacity limitation, and development imperatives and mitigation expectations (CDKN, 2020). The outcome is an enduring dilemma in the very core of Question 1: climate diplomacy can socialize states into collective commitments, but the balancing of national interests with global sustainability remains precarious.

In order to realize how these dynamics are put into practice, the role of knowledge-sharing platforms is central in that they bring together foreign policy, science, and multilateral governance, as illustrated in Figure (1) below.

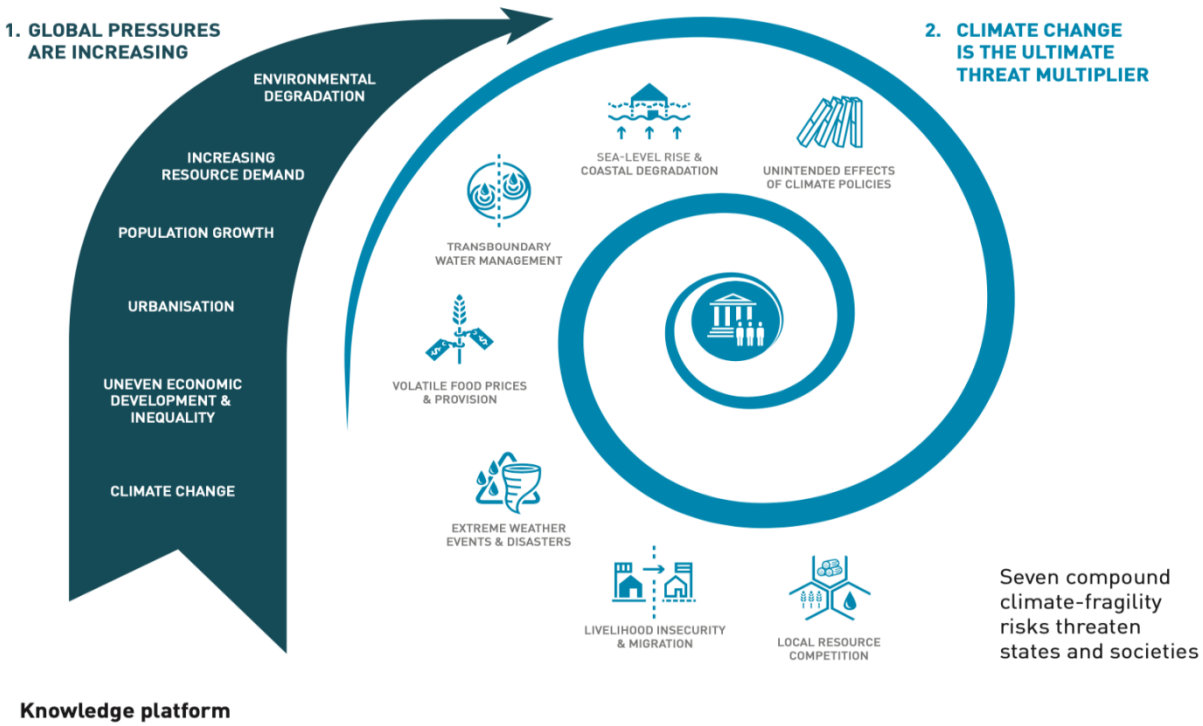

Figure 1: Knowledge Platform

Source: (Detges, 2017)

The figure above demonstrates the exchange of knowledge in the interinstitutional, interstate, and non-state levels and how the combination of the foreign policy instruments, negotiation process, and implementation channels is interconnected.

Neorealism intensifies this conflict by setting the behavior within the framework of anarchy and not within the context of domesticity. According to the description by Waltz, states as functional equivalents react to the pressures of the system and the relative capacities, and stability differentiates between bipolar, multipolar, and unipolar orders (Devetak, 2014; Freire, 2019). It is possible but fragile to cooperate on climate, looking at this perspective: distributional issues concerning costs and technology may become an issue leading to bargaining deadlocks, and the change in polarity or power can introduce new veto players (LaRoche & Pratt, 2018). In its turn, the environmental security scholarship cautions

that intra- and inter-state tensions could be triggered by the degradation and unbalancing of resources and the uneven resource distribution, yet water and other shared resources might also be used to foster cooperation when the institutions are strong (Gleick, 2018; Krampe & Mjoebk, 2018; Christidis and Stott, 2015). A re-determined security agenda that puts human security and human development, as opposed to militarized responses, in a better position would be more in line with resilience-oriented diplomacy (von Lucke, 2020).

Governance architecture also preconditions the results in Question 2. The governance of the global environment is fragmented with overlapping areas of jurisdiction, fora and poor central leadership as demonstrated by the mandate and resources of the UNEP (Bulkeley, 2015). The expansion of agreements and institutional sprawl may also undermine coherence, create mandate conflicts, and encourage forum shopping (Bulkeley, 2015). Fragmentation, however, is not just an obstacle; it has provided points of entry to coalitions of the willing, sub-state actors and experimentalist governance that can scale successful practices. Multilevel politics also go in both directions: transnational markets influence local land and resource struggles, and global regulations flow down to national and local policy (Horton et al., 2016). To build up climate diplomacy, then, it must be orchestrated at all scales: matching national efforts to finance, technological transfers, and capacity-building that are believable to both donors and receivers (UN SDG Knowledge Hub, 2018), as discussed in Figure (2):

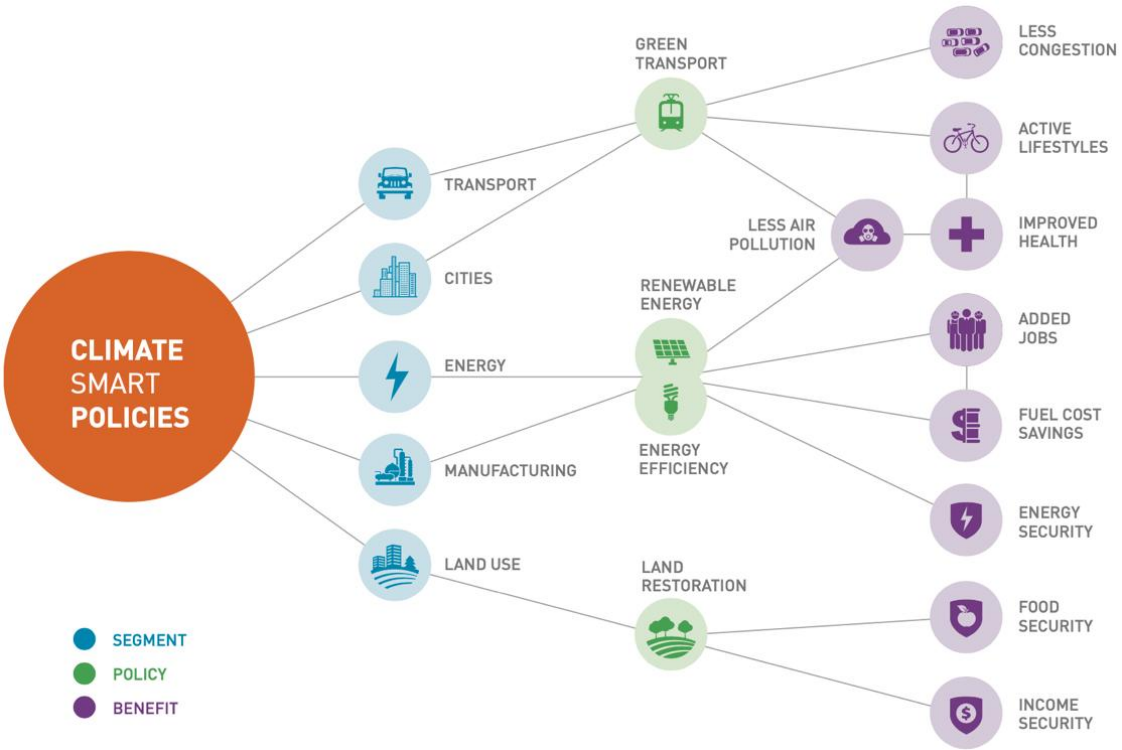

Figure 2: The Cascading Benefits of Climate Action

Source: (Detges, 2017)

As shown in the above figure, climate diplomacy has the power to open the door to co-benefits, which are better health, energy security, economic resilience, and social stability, and give people increased reasons to act together.

The effective climate diplomacy is pivoted on distributional politics, in particular, the North-South equity. The issue of common but differentiated responsibilities and respective capabilities has long been a concern of negotiations, as countries struggle with other countries, have disparate histories, development levels, and mitigation capabilities (Woodroofe & Guy, 2020; Federal Foreign Office of Germany, 2018). Emerging economies are advocating plenty of policy room to alleviate poverty and industrialize, but they also realize domestic air contamination and climate threats encourage investments in renewables and

efficiency (Moran et al., 2019). States of small islands and deltas focus on existential risks and demand ambitious temperature targets and loss-and-damage accords. The land-use emissions of Brazil, the development process of China, and the poverty alleviation priorities of India are examples of the heterogeneity of the so-called Global South in itself (Krampe & Mitrotta, 2018). This type of diplomacy that recognizes such asymmetries and balances between ambition and fair transition, concessional finance and access to technology, is now most likely to turn promises into practice (UN SDG Knowledge Hub, 2018).

Diplomacy is anchored to material realities through the scientific indicators. The global temperature, greenhouse gas levels, oceanic heat content, and rise of sea level offer common grounds of accountability and learning (Schneider et al., 2018; Siam & Eltahir, 2017). The measurements of 2018–2019 indicated record-high levels of CO_2, CH_4 and N_2O and sustained warming on the continents with strong regional abnormalities (World Glacier Monitoring Service, 2019; ECMWF, 2019). The evaluation of the carbon budget shows that land and ocean sinks sequester about 45% of anthropogenic CO_2, but there are still imbalances that highlight uncertainties that make precaution prudent (Friedlingstein et al., 2019). Put in a different light, such metrics are the points of interest of transparency frameworks, stock takes, and ratchet mechanisms, which connect science to policy cycles as demonstrated in Figure (3) below:

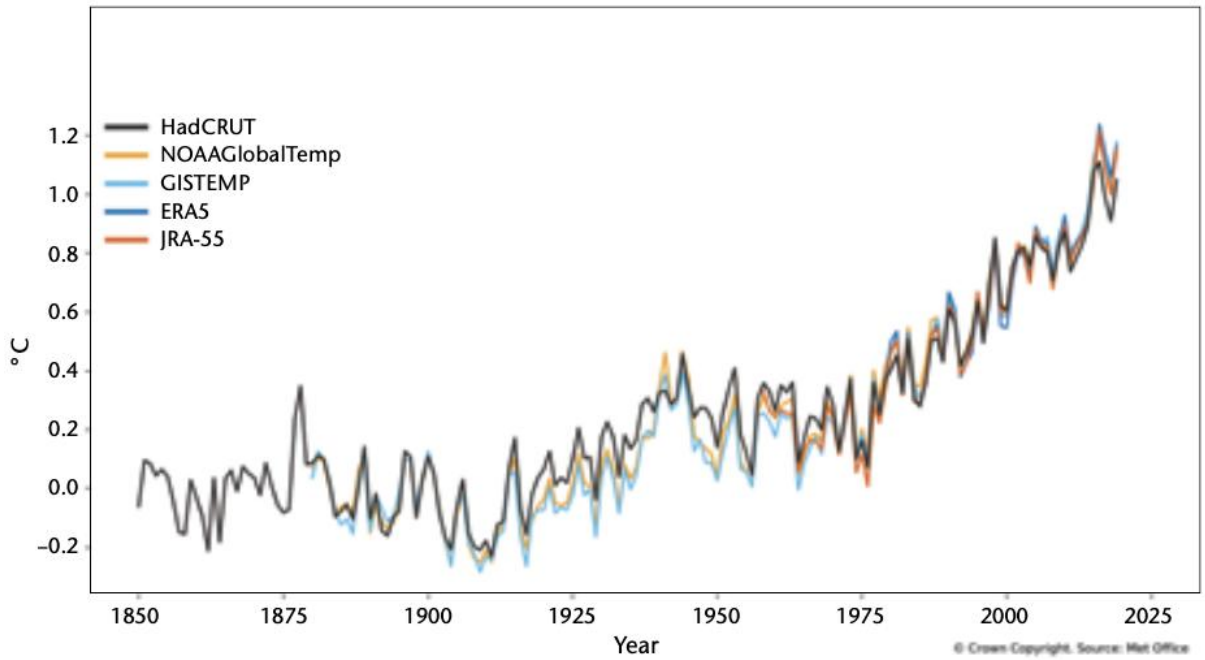

Figure 3: Global annual mean temperature difference from pre-industrial conditions (1850–1900). The two reanalyses (ERA5 and JRA-55) are aligned with the in-situ datasets (Had CRUT, NOAA Global Temp and GISTEMP) over the period 1981–2010.

Source: (Met Office, 2019)

As Figure (3) above shows, the average global temperatures have been rising steadily between 1850 - 1900 and the current period, which explains why the need to incorporate science-based targets in climate diplomacy is urgent.

Security framings are more urgent but need to be handled with caution. The climate crisis is a threat multiplier that interacts with a weak social platform, food and water insecurity, and geoeconomic rivalry between the Arctic and the South China Sea (Werrell and Femia, 2019; The Climate Reality Project, 2019). Non-linear damages and the disproportionate impact on the poorest and the shrinking window of risk management are the IPCC assessments of 1.5°C (Hersbach et al., 2019; WMO Greenhouse Gas Bulletin, 2019). This kind of insight has already been factored into diplomatic processes (e.g. The Hague security dialogues or UNSC deliberations), though institutionalized, cross-sectoral preparedness is still

currently unfinished (Legeais et al., 2018). Risk is thus to be mainstreamed, and adaptation together with mitigation and development aligned, and resilience led by locals, be funded through effective climate diplomacy.

Lastly, the nature of negotiation and veto politics determines the possibilities. Global environmental politics is an intricate set of issues, actors, and sites where coalitions, side-payments, and sequencing become important (O'Neill, 2017; Christoff, 2016). A determined coalition is not always defeated by economically powerful states, which face package deals to mitigate plus finance, technology, and flexibility by credible veto (Dimitrov, 2016; Bodansky, 2016; Parker & Karlsson, 2018; Panke, 2019). It is the dynamism of the field, represented by hundreds of multilateral environmental agreements and the mass attendance at COPs, that is an indicator of not only political relevance but also the difficulty in coordination (Jinnah, 2017; Rajamani, 2016; UNFCCC, 2016). The lasting challenge of climate diplomacy is to convert that energy into sustainable, fair commitments.

3. Methodology

3.1 Research Design

This study employs a qualitative-descriptive research design, with documentary and secondary data analysis. This is to critically analyze the nexus between climate change and international relations, how international climate diplomacy contributes towards collective environmental commitment and what pitfalls exist in maintaining a balance between national interests and global sustainability ambitions. The methodology allows considering conventions, treaties, multilateral interactions, and global reactions to climate change as a whole, based on the reports of the United Nations Framework Convention on Climate Change (UNFCCC), Intergovernmental Panel on Climate Change (IPCC) and other scholarly sources. The qualitative approach is the most appropriate since climate diplomacy exists within a variety of political, cultural, and institutional backgrounds, in which meanings and interpretations play the leading role in interpretations (Bodansky, 2016; Addaney, 2019).

3.2 Research Philosophy

The philosophical basis of this study is interpretivism, which focuses on the meaning and complications of social phenomena that include diplomacy and government, as well as international negotiations. Interpretivism presupposes that reality is socially constructed and that the reaction that states have to climate change depends on the cultural, political, and institutional background. Accordingly, the research paper views international conventions/diplomatic systems as dynamic, made through dialogue, contention, and compromise (Luterbacher & Sprinz, 2011). This philosophical perspective makes it possible to analyze the context of the perception of responsibilities, rights, and obligations by actors in climate governance.

3.3 Sample of the Study

As this study is qualitative and exploratory, the sample will comprise the documents of the policy, treaties, and other international agreements and scholarly works that will cover issues of climate change and international relations. The main examples are the UNFCCC (1992), the Kyoto Protocol (1997), the Paris Agreement (2015), and the latest reports by the IPCC and the World Bank (2016). To emphasize the regional aspect, the paper will rely on climate impact studies on the Middle East and North Africa (MENA), with specific reference to the Arab Peninsula and Jordan, as these two areas are the most sensitive to extreme heat, drought, and water shortage (Arab News, 2020).

3.4 Instruments of the Study

The primary research instrument is a documentary analysis with the assistance of secondary data, such as climate models and reports. The PRECIS (Providing Regional Climates for Impacts Studies) created by the UK Met Office Hadley Centre is one of such models that offers the future projections of the temperature and precipitation changes on a regional scale (Rudel, 2016). The other instruments that will also be added are published peer-reviewed articles, government reports, and climate policy documents

that can be used as evidence to examine both global diplomatic negotiations and local climate effects, as shown in Figure (4) below:

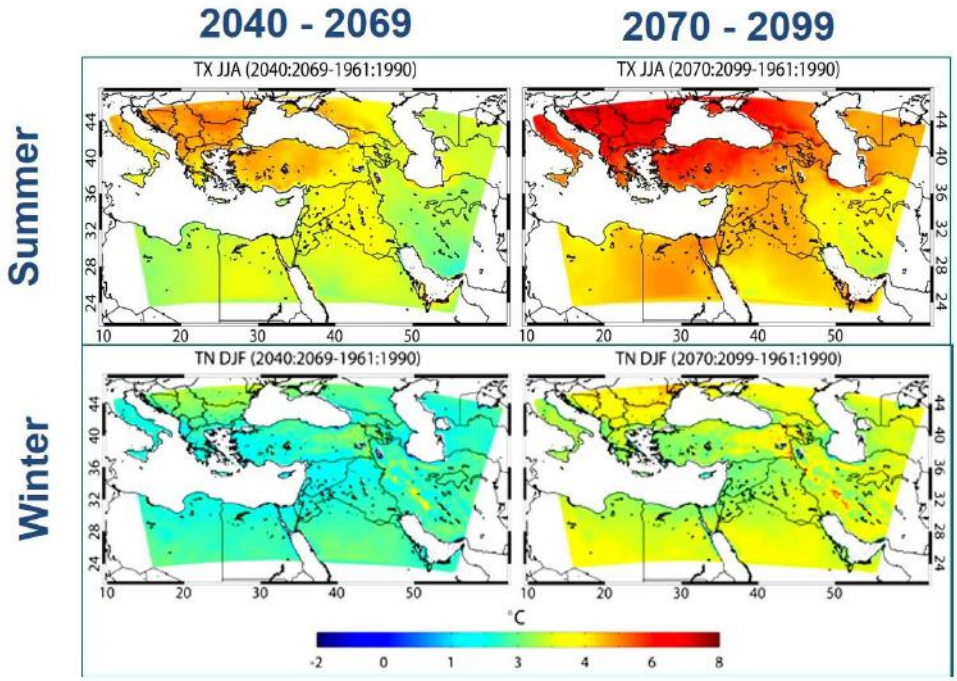

Figure 4: Summer and Winter Temperature Shift using the PRECIS Model to Collect Data

Source: (Laura & Hayley, 2020)

Figure 4 above illustrates the estimated change in the summer and winter temperatures in the MENA region based on using the PRECIS model. This number has been put here to show how scientific tools (climate models) give the empirical basis of analyzing policy and diplomatic reactions.

3.4.1 Validity of the Instrument

Triangulation of several sources in this study attains validity, which guarantees the suitability of interpretations. Through cross-verifying of climate predictions made by the scientific models (e.g., PRECIS), policy models (e.g., UNFCCC, Kyoto Protocol, Paris Agreement), and secondary scholarly sources, the study ensures that it does not rely on single-source biases (Drine, 2018). In addition, global projections are contextually supported by regional evidence from Arab News (2020) and the World Bank (2016).

3.4.2 Reliability of the Instrument

The reliability is supported through the use of replicable datasets that include IPCC reports and peer-reviewed models. The international agreements and climatic data are reliable and publicly available, thus enabling them to be replicated by researchers in the future. Also, the validation of other global institutions (e.g., NOAA, World Bank, IPCC) enables consistency and the validity of the findings (Katharina & Linda, 2017).

3.5 Data Collection

A systematic literature and secondary reports review was used to collect data between 1990 and 2023. Sources include:

- International treaties (UNFCCC, Kyoto, Paris Agreement).
- Climate predictions by IPCC and World Bank.
- MENA regional climate.

- Such media and policy reports like Arab News (2020) on recent floods and droughts.
- The national inventories and mitigation data of greenhouse gases were acquired through the latest Fourth National Communication (2023) of Jordan and the Second Biennial Update Report (2022).
- Economic Modernization Vision (20223033) of Jordan offered policy updates and priorities on adaptation.
- The international climate change figures were made to match the level of warming, the CO_2 concentration, and the sectoral impact with the assistance of IPCC AR6 (2023).

Figure (5) summarizes the diplomatic aspect of this study as it reflects the gathering of the national delegation at the COP28 summit in Dubai, during which high-level negotiations on mitigation, adaptation, climate finance, and the Global Stocktake were promoted. Including this picture in the methodology highlights how empirical the research is based on the processes of international engagement, and this visual content makes the material consistent with the overall analytical focus of global environmental commitment and climate diplomacy.

Figure 5: Representatives and negotiators at the COP28 closing plenary in Dubai, highlighting a key moment in global climate diplomacy.

Source: (UNFCCC / COP28 Photo Archive (2023))

3.6 Data Analysis

The data analysis uses a thematic methodology of qualitative analysis. The documents and data are coded into the following themes: international climate diplomacy, national vs. global interests, environmental security in MENA, and sustainable futures via multilateral structures. The comparative analysis is used to learn the mechanisms of the treatment of climate change in the global sphere (through the Kyoto Protocol and Paris Agreement) and the regional (MENA-related) one. The descriptive statistics of the world climate models complement the findings of the qualitative results by offering forecasts of the change in temperature and precipitation. Figure No. (6) below underscores the estimated reduction in rainfall in the Arab Peninsula and the MENA region. Its presence here shows how data analysis is able to integrate model outputs into the interpretation of the future water security challenges.

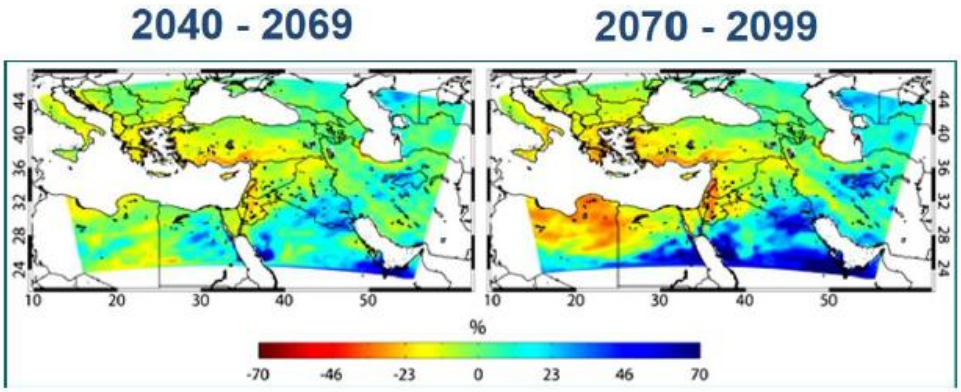

Figure 6: This figure highlights the shift in annual mean precipitation, using the PRECIS Model output data is collected from 2040-2069 (left) and for (right) 2070-2099
Source: (Katharina & Linda, 2017)

4. Findings

4.1 Findings Related to the First Research Question: How does international climate diplomacy foster collective environmental commitment among states, and what challenges arise in balancing national interests with global sustainability goals?

International climate diplomacy is central to the formation of environmental pledges of states, such as Jordan, through the integration of international sustainability standards into the national policy. The consideration of the United Nations Framework Convention on Climate Change (UNFCCC), which Jordan has had since 1992, reveals the development of the sense of responsibility due to the principle of the common but differentiated responsibilities as a result of climate diplomacy. This principle will enable Jordan, being a developing nation, to make its share in the common climate objectives and consider its scarce resources and higher vulnerabilities.

Jordan joined the formal climate diplomacy with the submission of the First National Communication Report in 1997, and, as a result of the document, the state is obligated to keep track of emissions, record its domestic situation, and consider possible renewable energy sources. This process made Jordan not only a receiver of global structures but also a provider of knowledge-sharing systems. The reporting aspect also established accountability and inculcated the idea that environmental protection is not only a national concern, but it is also a global requirement.

Nonetheless, it has been difficult to balance between international commitments and domestic realities. The semi-arid climate and geography of Jordan ensure that it is among the most arid nations in the world, receiving less than 200 millimeters of rainfall each year. This shortage is further intensified by the fact that its population is growing fast due in part to the influx of refugees, which floods water, energy and agricultural resources. International sustainability targets are difficult to implement because of these national pressures. The annual rainfall pattern of Figure (7) below shows the limited and uneven precipitation, which complicates a lot the attainment of water-use efficiency targets.

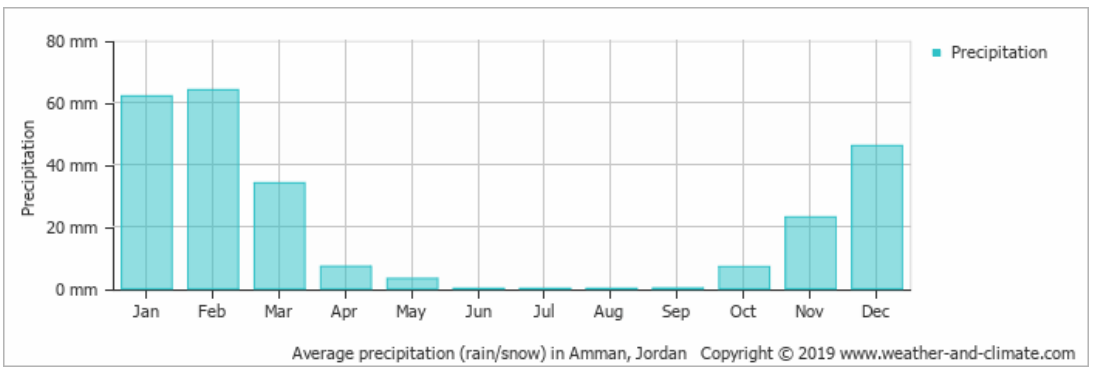

Figure 7: Annual precipitation (rainfall)
Source: (weather and climate, 2019)

The issue of economic growth and emission reduction is also another paradox in the climate diplomacy process. In Jordan, the energy sector is the leading contributor of greenhouse gas (GHG) emissions, with about 74% of the total national emissions recorded in 2016. In 2021, the total emissions of the country were approximately 35.3 million metric tonnes of CO_2-equivalent (CO_2e) in Jordan, which is an annual growth of approximately 2.1% since 1990 (World Resources Institute 2023). This trend is indicative of further dependence on fossil-based energy and expansion in transport and industry, even with new investment in renewable energy and efficiency.

Figure 8 illustrates total greenhouse-gas emissions of Jordan between 1990 and 2021, which are gradually yet steadily increasing in carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), and fluorinated gases (F-gas).

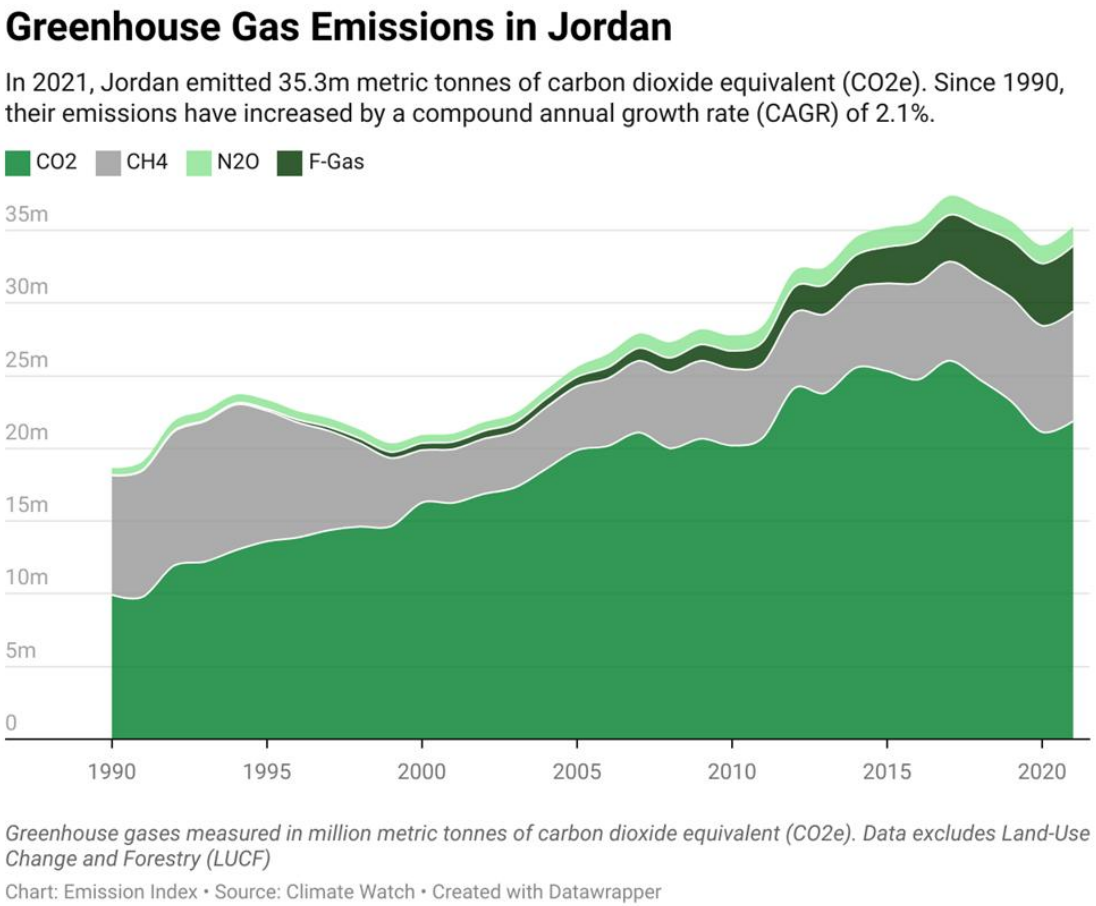

Figure 8: Jordan's Sectoral Greenhouse Gas Emissions by Sector (2019 baseline)
Source: World Resources Institute (2023), Climate Watch Data

Diplomatic involvement also demands that Jordan create domestic organizations like the National Committee on Climate Change (NCCC) that also oversee climate policies among ministries. However, the conflicting nature of priorities of development, security and refugee integration can occasionally reallocate resources towards climate-oriented programs. In such a way, the international climate policymaking encourages Jordan to be a member of global processes but still necessitates the constant trade-off between national needs, in particular, economic stability, and water security, and global climate goals.

4.2 Findings Related to the Second Research Question: In what ways can international engagement mechanisms—such as multilateral negotiations, treaties, and partnerships—be strengthened to build a sustainable future through effective climate diplomacy?

The case of Jordan shows that the international engagement mechanisms are essential in the development

of small and resource-strained states to create sustainable futures. To make these mechanisms stronger, it is necessary to increase the inclusivity, technical support, and financial aid provided by multilateral diplomacy.

This is possible through multilateral negotiations in which Jordan has been an active participant under the Paris Agreement framework. One of its diplomatic tools is its submission of Updated Nationally Determined Contribution (NDC) in 2022. Jordan made a commitment to lower GHG emissions by 31% by 2030, 5% unconditional and 26% conditional targets, conditional on international assistance and technology transfer. This two-sided strategy testifies to the sensitivity of equity in climate negotiations, where the developing states may set realistic objectives but demand collective responsibility on the part of the richer states.

To make such mechanisms stronger, it is essential to make sure that financial commitments are turned into real flows of resources. To achieve its conditional target of USD 5.7 billion, Jordan estimated that it would take USD 542 million domestically and USD 5.7 billion total. This funding disconnect can be seen as a more general issue in climate diplomacy: treaties and negotiations can set lofty goals, but their implementation will depend on a stable and stable financial contribution of the international community.

The other channel of enhancing international interaction is partnerships. Jordan has also benefited from the cooperation of Germany and other donors through the National Green Growth Plan (Ministry of Environment & GGGI, 2017), which promotes renewable energy and sustainable transport as well as green industry. The cost-benefit analysis of the chosen interventions of green growth in Jordan, as illustrated in figure (9) below, highlights the real economic and environmental payoffs of international partnerships.

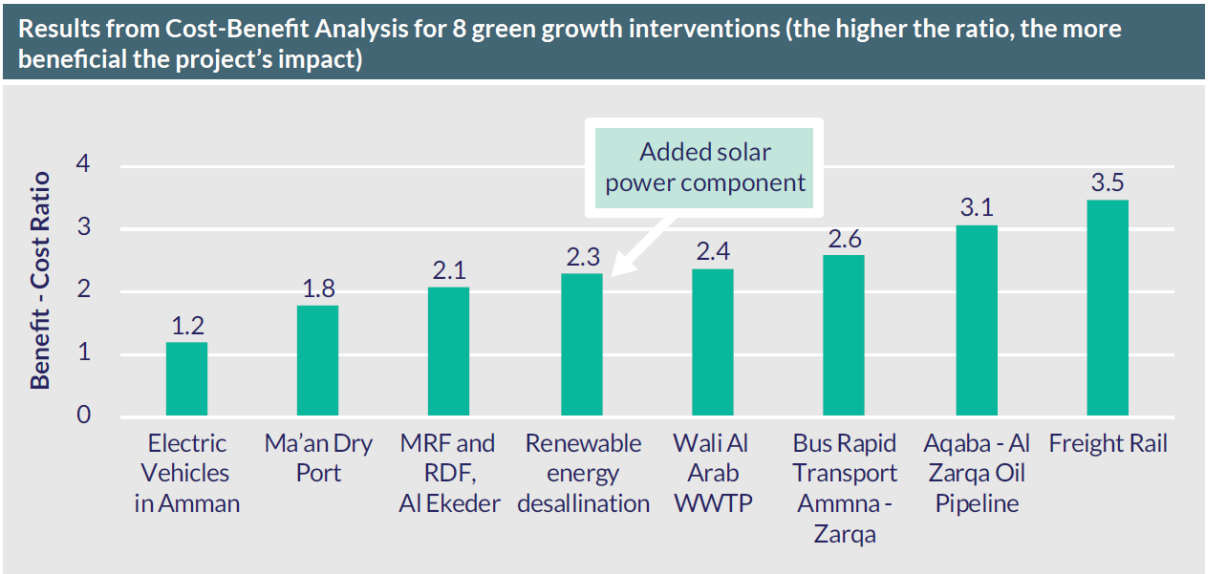

Figure 9: Cost-Benefit Analysis for 8 Green Growth Interventions

Source: (National Green Growth Plan for Jordan)

Regional environmental diplomacy in the MENA region remains constrained by longstanding political tensions. Shared climate vulnerabilities, particularly in transboundary water basins underscore the importance of cooperation; however, past experiences reveal that such arrangements often face political, institutional, and security-related fragilities. These realities highlight the need to strengthen climate diplomacy frameworks that can operate independently of geopolitical disputes, enabling technical collaboration on water security, early warning systems, and climate adaptation to continue even during periods of regional instability. Building such depoliticized and resilient mechanisms would allow countries in the region to address common climate risks more effectively and equitably.

The international treaties and partnerships should also invest in capacity building and technology transfer,

particularly in water management and renewable energy. The air quality and water resource monitoring systems, which promote the donor-funded activities in Jordan, can serve as an example of how international support can help a country become more resilient directly. Such support should also be extended to other vulnerable areas, such as the agricultural sector and biodiversity; this will enable Jordan to have a higher level of sustainability in its national development strategies.

Lastly, inclusive governance is the key to the success of climate diplomacy. The participation of the civil society, the players in the private sector, and the academia in Jordan via the NCCC shows the importance of wide participation. The reinforcement of such channels will guarantee the international commitments are not seen as being imposed but as joint agendas owned by the domestic players.

5. Discussion

5.1 Discussion Related to the First Research Question: How does international climate diplomacy foster collective environmental commitment among states, and what challenges arise in balancing national interests with global sustainability goals?

The findings indicate that Jordan is being socialized into the global norms of responsibility and transparency by its consistent involvement in the UNFCCC procedures, i.e. the first in 1997 First National Communication and the subsequent cycles of reporting and setting of targets which is precisely the way constructivist accounts anticipate that diplomacy brings about collective commitment through the proliferation of a notion like equity and climate justice (Neufeld, 2019; Zaree et al., 2016). Such mechanisms as common but differentiated responsibilities (CBDR-RC) enable states with limited capabilities to make credible commitments but leave space for development, which is consistent with the pledge-and-review structure of the Paris Agreement, where ambition is ratcheted but national circumstances are accommodated (Oberthür & Groen, 2017; Climate Diplomacy, 2020). The climate action, in the case of Jordan, is entrenched in the country through the institution of periodic communications and NDC submissions, such that environmental protection becomes an international responsibility, as well as a customary national policy (UNFCCC, 2016; Oberthür & Groen, 2017). These channels are reminiscent of the virtues of governance logic discussed in the literature, according to which regimes, regulations, and surveillance minimize transaction costs and organize cooperation between otherwise conflicting interests (Ghumman & Horney, 2016; Oberthür & Groen, 2017).

Simultaneously, the issues identified in the findings include acute water shortage, population pressure related to refugee flows, and an energy system that is long reliant on imported fossil fuels, which are the manifestations of the existing tensions between national needs and global ambitions that the realist and environmental security views foresee in the context of the anarchy and resource overload (Devetak, 2014; Hirst, 2018; Krampe & Mobjork, 2018; Gleick, 2018). The emissions profile in Jordan, where the energy sector (approximately 80%) is dominant and increasing to 35 Mt CO_2e in 2021, suggests that structural constraints are influencing the policy ambition instead of the lack of policy desire. Hence, pledge-and-review is not sufficient to seal the ambition gap without investments in finance, technology, and just-transition aid (Council of the EU, 2020; CDKN, 2020). Such deficits in implementing elaborate strategies are predicted by the literature, as despite the increase in the intensity of climate risks manifested through sustained warming and historic greenhouse gas concentrations, the politics of distribution and capacity frequently interfere with the delivery (Schneider et al., 2018; Friedlingstein et al., 2019; Climate Home News, 2020). In this regard, the balancing act of Jordan is not an exception but a paradigmatic example of the North South equity issue at the fulcrum of diplomacy, where CBDR-RC has to be linked to plausible finance and access to technology in case collective commitments are going to be fulfilled (Woodroofe & Guy, 2020; Federal Foreign Office of Germany, 2018; UN SDG Knowledge Hub, 2018).

Lastly, the combinative functions of knowledge platforms and transparency frameworks can justify the fact that spillover effects of reporting can take place even outside the official negotiation rooms in Jordan. According to the literature, climate diplomacy connects science to cycles of policies (e.g., temperature anomalies), anchors accountability, and knowledge sharing between ministries, cities, and non-state

actors, and facilitates learning about the policy and its adoption (Detges, 2017; Met Office, 2019; Lundborg, 2018). The practice of multilevel governance is demonstrated by Jordan, whose participation across the civil society, the private sector and academia was enlarged with the help of NCCC, as a translation of external commitments into domestic co-ownership, which is identified in the literature as a prerequisite of a lasting collective action (UN SDG Knowledge Hub, 2018; Bulkeley, 2015).

5.2 Discussion Related to the Second Research Question: In what ways can international engagement mechanisms—such as multilateral negotiations, treaties, and partnerships—be strengthened to build a sustainable future through effective climate diplomacy?

The findings underscore that Jordan's Updated Nationally Determined Contribution (2022), including unconditional and conditional components, is an effective diplomatic device for aligning fairness with feasibility, but its significant financing gap reveals where multilateralism must be strengthened: converting promises to predictable flows and pairing targets with bankable pipelines (Jordan's NDC, 2022; Council of the EU, 2020). Institutional and liberal perspectives in the literature suggest three reinforcing levers. First, deepen the Paris architecture's orchestration functions so that monitoring, review, and stock takes are explicitly tied to concessional finance, technology transfer, and capacity-building—i.e., linking "pledge-and-review" to "fund-and-enable"—thereby lowering delivery risk for states like Jordan (Oberthür & Groen, 2017; UN SDG Knowledge Hub, 2018). Second, use fragmentation strategically: while overlapping fora can dilute coherence, they also create entry points for coalitions of the willing, city networks, and experimentalist governance that scale successful practices across water, energy, and transport—the very sectors prioritized in Jordan's green growth agenda (Bulkeley, 2015). Third, embed science more tightly into decision cycles so that stock takes, carbon budgets, and co-benefit metrics guide sequencing and side-payments in negotiations—facilitating package deals that align mitigation with adaptation, security, and development (Friedlingstein et al., 2019; Schneider et al., 2018; O'Neill, 2017; Parker & Karlsson, 2018).

The examples of Jordan and Germany partnerships, mentioned in the findings, are the illustrations of how the multilateral intent can be operationalized through bilateral and plurilateral arrangements through provision of finance, technical and policy design support to renewables, transport and green industry. According to the literature, such coalitions can be described as practical solutions to the problem of ambition gaps, in which side-payments and sequencing can be used to overcome veto politics and distributional conflicts (Dimitrov, 2016; Bodansky, 2016; Panke, 2019). Similarly, regional cooperation over shared basins like the Yarmouk illustrates that environmental diplomacy can persist, and even build trust, amid geopolitical volatility when institutions are robust—consistent with environmental security scholarship that treats shared water as a vector of both risk and cooperation (Gleick, 2018; Krampe & Mobjörk, 2018). Tightening these regional arrangements implies that the technical deals involving water and energy are not subject to wider political conflicts and investing in cross-border surveillance and early warning capabilities, a step that is linked to resilience-oriented diplomacy by the governance literature (Chmutina et al., 2018).

Finally, the findings' emphasis on inclusive domestic governance—engaging civil society, the private sector, and academia through the NCCC—aligns with the literature's call to widen the diplomatic arena to cities and non-state actors. "City diplomacy" and subnational networks can accelerate implementation, generate demonstrable co-benefits (public health, energy security, jobs), and create bottom-up pressure that raises national ambition over time (Liapi, 2010; Detges, 2017). Theoretically, this is where institutional design meets with constructivist norm cascades: the inclusion process makes majorities more legitimate, makes forum-shopping less appealing, and makes the international commitments more internalized than perceived externality (Bulkeley, 2015; UN SDG Knowledge Hub, 2018). Collectively, the discussion indicates that reinforced climate diplomacy on behalf of Jordan and peers is a combination of the iterative logic of the Paris regime and the provision of credible enabling resources, leveraging fragmentation to scale viable alliances, regionalize cooperation when risks are shared, and institutionalizing inclusive governance in such a manner as to have the global commitments translated

into action at local and national levels (Climate Diplomacy, 2020; Oberthür & Groen, 2017; Jinnah, 2017; Rajamani, 2016).

Another comparative approach also draws attention to the place of Jordan among peer countries. As an example, Morocco has committed to a CO_2 cut of 45.5% (12% unconditional and 33.5% conditional) of its GHG emissions by 2030 and has convened global alliances via projects like the Noor Ouarzazate Solar Complex, one of the largest concentrated solar power facilities in the world. Jordan and Morocco are similar in that they face the same structural issues, such as water shortages, energy dependence, and exposure to climate shocks, but their climate policy has managed to redirect major investments in renewable energy using bilateral and multilateral relations. Jordan can also take advantage of such alliances and reliance on 31% NDC (2022) to draw green finance, enhance technology transfer, and increase domestic climate projects.

6. Conclusion

This study aimed to explore the roles of international climate negotiations in establishing societal environmental commitment among the states without compromising the strains of national interests and international sustainability. Using a qualitative-descriptive study that is based on interpretivism, the researchers examined treaties, policy documents, climate reports, and secondary data, with Jordan as a case study. The sample consisted of international accords, including the UNFCCC (1992), Kyoto Protocol (1997), and Paris Agreement (2015) and regional data in the Middle East and North Africa (MENA). The empirical background of the study of the relationship between diplomacy and commitments was formed by documentary analysis and climate model data (e.g., PRECIS), whereas thematic coding made it possible to interpret the rather subtle question.

The results indicate that climate diplomacy is important in institutionalizing international standards of accountability and openness at the national level. The involvement of Jordan is manifested by the First National Communication (1997) and consecutive Nationally Determined Contributions (NDCs) as an illustration of the diffusion of norms to developing states by making the principle of common but differentiated responsibilities and respective capabilities (CBDR-RC) internalized in Jordan (Neufeld, 2019; Oberthür & Groen, 2017). However, according to realist and environmental security views, the structural issues, including water scarcity in Jordan, demographic pressures caused by refugees, and fossil fuel dependency, cause the conflict (strain) between growth and mitigation (Devetak, 2014; Gleick, 2018; Krampe & Mobjork, 2018). These inconsistencies reflect the worldwide arguments on fairness and fairness, and point to the enduring implementation void between the diplomatic promises and in-the-field action (Council of the EU, 2020; Climate Home News, 2020). Latest stocks reveal that the national emissions amounted to 35.3 Mt CO_2e in 2021, and the updated NDC (2022) goal to reduce 31% by 2030 is therefore urgently needed (World Resources Institute, 2023).

The findings also indicate that credible financial flows, transfer of technology and capacity-building are necessary to strengthen multilateral negotiations and partnerships. The Updated Nationally Determined Contribution by Jordan (2022) promises a 26% conditional cut in emissions by 2030, provided an estimated USD 7.5 billion of international assistance. That is an illustration of fairness being ingrained in the pledge-and-review frame of the Paris Agreement but also reflects on the ongoing delivery gap (Jordan NDC, 2022). The institutionalist approach opines that enhanced coordination of review and finance systems would minimize the transaction costs and raise the compliance (Ghumman & Horney, 2016). Liberal and constructivist views also underline the role of partnerships, including that of Jordan with Germany, and partnerships that are inclusive by resorting to the National Committee on Climate Change (NCCC), where civil society, the private sector, and academia are involved (Bulkeley, 2015).

These findings have important implications. In their case of global governance, they emphasize the importance of matching normative structures with the resources to enable diplomacy and to make it not symbolic but transformative. To the developing states, the case of Jordan highlights the way that the involvement in the international regimes can trigger the institutional development and policy integration

as long as promises are supplemented with external assistance. In theory, the research supports the usefulness of integrating the realist, institutionalist, and constructivist approaches to explain the potential and constraints of climate diplomacy.

Regardless of these contributions, the study is limited in nature. It depends on secondary data and documentary analysis, which implies that results are interpretive as opposed to empirical using primary field tests. Also, the concentration on Jordan, as illustrative, restricts extrapolation to different settings. Incorporating interviews with diplomats, negotiators, and civil society actors might be included in future research to triangulate the views or make comparative analyses across the MENA states.

Three recommendations can be drawn up based on the findings: (1) enhance the connection between finance and review process within the Paris Agreement; (2) decouple regional environmental cooperation and political conflicts to sustain cross-border water and energy initiatives; and (3) diversify city diplomacy and subnational involvement to enhance bottom-up climate action.

This study is novel in its contribution in the sense of being conceptual in the sense that it combines various theoretical frameworks to explain the mechanics of climate diplomacy, and empirically, the study foreshadows the case of Jordan, a small but active actor in climate negotiations whose case has been underrepresented in global governance discourse. Placing Jordan in a wider North-South relationship, the paper proves the contribution of smaller states in climate diplomacy and illustrates the structural injustice that needs to be resolved to achieve shared sustainability.

Another important issue brought out by this study is the importance of community-based climate diplomacy. The Al-Munther Al-Monakhi Initiative, which was initiated at COP29 voluntarily, can serve as an informative precedent of a long-term public activity that is an extension of nationwide climate activities. Its people-based strategy is part of the long-term Jordan adaptation and resilience objectives.

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