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HIGH POLICY ANALYSIS FROM THE COPENHAGEN SCHOOL PERSPECTIVE : THE SECURITIZATION OF THE POST-COLD WAR CLIMATE CRISIS

MA Thesis by

Selen Gezer

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SELEN GEZER

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OZET

1896 yılında ünlü kimyager Svante Arrhenius'un atmosferdeki değişikliklerinin sera gazı emisyonlarından kaynakladığını keşfetmesi, iklim krizinin insan etkisiyle ortaya çıktığına dair araştırmaların artması konusunda bir dönüm noktası olmuştur. Bu önemli keşiften bir yüzyıl sonra Soğuk Savaş'ın etkilerinin uluslararası ilişkilerde dönüşmeye başlaması ile önceleri çevresel bir sorun olarak değerlendiren İklim Krizi yüksek politika öncelikleri olarak değerlendirilir. Gelişen teknoloji ve bilimsel çalışmalar sonunda uzmanlar tarafından ortak mutabakata varılmış, Birleşmiş Milletler bu konuda liderlik görevini üstlenerek sorun çözümünde öncü olmuştur. 1990'lardan sonra İklim Krizi sadece çevresel bir sorun değil, aynı zamanda küresel siyasi ve ekonomik sistemlerin gözden geçirilmesini gerektiren küresel bir sosyal ve ekolojik krizdir.

İklim Krizinin nedenleri ve sonuçları ile mücadele edebilmek, küresel bir bağlam ve güvenlik yaklaşımı gerektirir. Sera etkisine katkıda bulunan CO2 emisyonları dünya çapında meydana gelir ve bu nedenle, önemli bölgesel farklılıkların anlaşılması gerekse de küresel bir sorundur.

Çok disiplinli bir yaklaşım kullanarak, iklim bilimi, uluslararası ilişkiler ve güvenlik çalışmalarından gelen içgörüleri bütünleştirerek, bu araştırma iklim krizi ile gelişen güvenlik kavramı arasındaki dinamik etkileşimi araştırıyor. İklim krizini güvence altına almanın sonuçlarını araştırıyor, onu acil bir güvenlik endişesi olarak çerçevelemenin motivasyonlarını, süreçlerini ve sonuçlarını değerlendiriyor.

Anahtar Kelimeler: İklim krizi, Kopenhag Okulu, güvenlikleştirme, küresel güvenlik, çevre hukuku, Soğuk Savaş Sonrası, yüksek politika endişeleri

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ABSTRACT

The groundbreaking discovery in 1896 by renowned chemist Svante Arrhenius, which established a link between greenhouse gas emissions and atmospheric changes, marked a significant turning point in research on the human-induced origins of the climate crisis.

A century later, as the effects of the Cold War began to shape international relations, the Climate Crisis transitioned from being perceived as a low-policy issue to a high policy priority. Advancements in technology and scientific studies led to a collective agreement among experts, with the United Nations taking the lead in addressing these challenges. Since the 1990s, the climate crisis has evolved into not only an environmental problem but also a global social and ecological crisis that necessitates a reevaluation of global political and economic systems.

Addressing the causes and consequences of the climate crisis requires a global perspective and a security-oriented approach. Greenhouse gas emissions, which contribute to the greenhouse effect, are a worldwide phenomenon and thus constitute a global problem, albeit with significant regional variations that need to be understood.

This research examines the link between the climate crisis and security through a multidisciplinary approach, investigating the causes of framing climate issues as urgent security concerns.

Keywords: climate crisis, Copenhagen School, securitization, global security, environmental law, post-Cold War, high political concerns

LIST OF ABBREVIATIONS

AR: Assessment Report

AR5: Fifth Assessment Report (by the IPCC)

AR6: Sixth Assessment Report (by the IPCC)

ASSAM: Association of Eurasian Scholars

AU: African Union

BMZ: Federal Ministry for Economic Cooperation and Development (Germany)

CBD: Convention on Biological Diversity

CEA: UN Economic Commission for Africa

CEWARN: Conflict Early Warning and Response Mechanism

COP: Conference of the Parties

COP21: Conference of the Parties 21 (referring to the 21st session of the Conference of the Parties to the UNFCCC)

COP27: 27th Conference of the Parties (to the United Nations Framework Convention on Climate Change)

CO2: Carbon dioxide

ECOWARN: Economic Community of West African States Early Warning Mechanism

ECOWAS: Economic Community of West African States

EEA: European Environment Agency

EU: European Union

EUROSTAT: Statistical Office of the European Union

FAO: Food and Agriculture Organization

GBV: Gender-based violence

GDP: Gross Domestic Product

GHG: Greenhouse Gas

ICCPR: International Covenant on Civil and Political Rights

ICJ: International Court of Justice

IMC: International Mediation Center

INSAMER: Istanbul Security Conference Center

IOM: International Organization for Migration

IPCC: Intergovernmental Panel on Climate Change

ISA: International Seabed Authority

MAP: Mediterranean Action Plan

MOFA: Ministry of Foreign Affairs

NATO: North Atlantic Treaty Organization

NDC: Nationally Determined Contribution

OPEC: Organization of the Petroleum Exporting Countries

OECD: Organization for Economic Co-operation and Development

OHCHR: Office of the United Nations High Commissioner for Human Rights

PIF: Pacific Islands Forum

REPowerEU: Renewable Energy Power for European Union

Ramsar Convention: Convention on Wetlands of International Importance

SR: Special Report

SREX: Special Report on Managing the Risk of Extreme Events and Disasters to Advance Climate Change Adaptation

SRREN: Special Report on Renewable Energy Sources and Climate Change Mitigation

SPDMM: South Pacific Defense Ministers Meeting

SYR: Synthesis Report

TASAM: Turkish Asian Center for Strategic Studies

UNCED: United Nations Conference on Environment and Development

UNCLOS: United Nations Convention on the Law of the Sea

UNDP: United Nations Development Programme

UNEP: United Nations Environment Programme

UNFCCC: United Nations Framework Convention on Climate Change

UNHCR: United Nations High Commissioner for Refugees

UNOWAS: United Nations Office for West Africa and the Sahel

UNSFA: United Nations Common Fish Stocks Agreement

USA: United States of America

WCED: World Commission on Environment and Development

WHC: World Heritage Convention

WHO: World Health Organization

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1. INTRODUCTION

In recent decades, climate change has emerged as an urgent and multifaceted security challenge, garnering widespread recognition and demanding immediate action. Backed by extensive scientific research and evidence, it is now widely acknowledged that mitigating greenhouse gas emissions, developing adaptation strategies, and protecting vulnerable areas and ecosystems are imperative to address this global crisis effectively.

The profound impacts of human activities on the environment have given rise to a range of consequences, including rising temperatures, sea-level rise, biodiversity loss, and the potential for conflicts. These pressing issues necessitate the implementation of robust policies and regulations aimed at mitigating their adverse effects, thereby establishing climate change as a top priority on the international agenda.

Understanding the climate crisis within the framework of international relations is essential for nations to identify, cooperate, and intervene collectively in this complex global challenge. Experts have warned of the security risks associated with climate change, highlighting the striking similarities it shares with traditional security concerns.

Building upon the evolving landscape of security paradigms since the Cold War, non-traditional security issues, including the climate crisis, have gained recognition as critical high-policy concerns. Energy supply, resource scarcity, humanitarian crises, and migration have now become intertwined with climate change, forming critical security factors that demand immediate attention and strategic responses.

This thesis draws upon the shifting security perceptions that have emerged in the post-Cold War era, leveraging the theoretical frameworks offered by "security theory" developed by the Copenhagen School. By employing these methodologies, this research aims to identify and evaluate the multifaceted challenges posed by the climate crisis within the realm of security.

The conceptualization of the climate crisis as a security issue begins by elucidating the centrality of international relations in comprehending this subject and its implications in high politics. Subsequently, an analysis of the similarities and differences between the climate crisis and traditional security problems is undertaken, exploring the theoretical foundations underlying the risks of conflicts associated with climate change. These include extreme weather events, rising temperatures, migration patterns, resource scarcity, and potential border conflicts, all of which are examined within the prevailing dynamics.

The subsequent phase of this study focuses on scrutinizing the actions undertaken by international actors to address and secure the climate crisis as a security issue. It entails evaluating reports, conferences, and mediation activities, with specific attention given to geopolitical advantages and disadvantages, resource distribution dynamics, and the capabilities of involved actors.

Finally, this thesis explores the realm of international legal measures that have been instituted to address the climate crisis as a global security concern. By examining the adaptation of existing solutions and considering their broader implications, this research sheds light on the intricate web of legal frameworks developed to tackle this complex issue.

By delving into these multifaceted aspects, this study aims to provide a comprehensive understanding of the climate crisis within the context of security. It emphasizes the urgent need for collective action, highlights the interconnectedness of various security factors, and underscores the imperative to address climate change as a pressing global security challenge.

1.1 Theoretical Background

The recognition of the climate crisis as an urgent policy issue has gained significant momentum in recent years, with increasing attention to its implications for global security. This thesis aims to explore the intricate complexities surrounding the provision of successful security in the context of the ongoing and universal impacts of the climate crisis. The study defines successful security as the ability to mobilize political will and foster concerted action among all states to effectively address the climate crisis and mitigate its far-reaching impacts.

1.1.1 Theoretical Framework

To comprehensively assess the process of recognizing and addressing the climate crisis as a security issue, this research adopts analytical methods derived from security theory, with a special focus on the concept of securitization. Within this theoretical framework, the climate crisis is framed as an existential threat that necessitates urgent and extraordinary measures, thereby justifying actions that transcend the boundaries of regular political processes. By employing these analytical methods, the study aims to investigate the extent to which the climate crisis has been securitized and elucidate its implications for global security dynamics.

1.1.2 Research Objectives

The research objectives are twofold. Firstly, the study aims to explore the profound challenges posed by the climate crisis, which, due to its universal impacts, extend far beyond previously recognized boundaries. Understanding these challenges is crucial for formulating effective strategies to address the climate crisis and safeguard global security. The study seeks to shed light on the multifaceted nature of the climate crisis as an environmental challenge and its implications for global security.

Secondly, the research endeavors to analyze the complex interplay between evolving security approaches, securitization processes, and international efforts aimed at mitigating and securing the climate crisis. By critically examining this interplay, the study aims to illuminate the dynamics between security frameworks and responses to the climate crisis, and identify the factors that shape and influence these interactions. This analysis will contribute to a deeper understanding of the climate crisis as a security challenge and inform the development of effective strategies for climate crisis mitigation and sustainable management within the realm of global security.

1.1.3 Methodology

Recognizing the limitations of military-focused and government-centered security approaches in explaining non-traditional global issues, this study employs security theory as an analytical method to understand the climate change phenomenon. Security theory emphasizes the process of defining an issue as a security problem through a speech act, elevating it beyond the realm of regular political agendas. The climate

crisis has gained recognition as a security issue among nearly all political authorities, including the United Nations.

To substantiate the necessity of emergency measures to address climate change, the study analyzes three main reasons. Furthermore, a benefit analysis method is applied to assess the potential consequences of neglecting the climate crisis as a security issue. Drawing upon current examples, experts predict the possible outcomes if urgent action is not taken to address the climate crisis, specifically exploring the impact of projected conflicts arising from the climate crisis on global security.

The methodology also incorporates cause analysis, which identifies three distinct categories: deep causes, intermediate causes, and triggering causes. Deep causes pertain to the slow recognition of the urgency surrounding climate change and the need for proactive long-term measures. Intermediate causes encompass the consequences of the climate crisis, including border disputes, risks of state vulnerability, and potential conflicts resulting from droughts and rising sea levels. Triggering causes shed light on the response of human systems to recurrent extreme natural events and emphasize the significance of maintaining the existing state of affairs.

To support the analysis, specific methods and concepts from security theory, such as the concept of securitization, are employed. This ensures a rigorous analysis of the climate crisis as a security concern and facilitates a systematic examination of its complex dynamics from a security perspective.

This theoretical background forms the foundation of the thesis, aiming to contribute to the existing body of knowledge on the climate crisis as a security issue. By employing analytical methods derived from security theory and examining the securitization of the climate crisis, the study provides valuable insights into the multifaceted nature of the climate crisis and its implications for global security.

1.2 Literature Review

1.2.1 Objectives

The literature review provides an overview of key studies and reports that contribute to the understanding of the climate crisis as a security issue, aligning with the conceptual framework of the study. It begins with the foundational work of Svante

Arrhenius, who recognized the link between human activities and changes in atmospheric CO2 levels. The review then moves on to discuss the contributions of Barry Buzan, Ole Waever, and Jaap de Wilde, who expanded the concept of security to include non-traditional threats such as the climate crisis.

The Intergovernmental Panel on Climate Change (IPCC) reports are highlighted as crucial sources of information and evidence on the climate crisis and its security implications. These reports provide comprehensive assessments of the scientific basis for climate change, its impacts, and the potential for mitigation and adaptation. The IPCC reports also address the securitization of the climate crisis, as recognized by the United Nations and other political authorities.

The literature review emphasizes the increasing urgency of addressing the climate crisis and the need for immediate and ambitious action. It highlights the impacts of climate change on various aspects of the environment, society, and economy, and the risks associated with exceeding temperature thresholds. The review also underscores the importance of international law, including treaties and principles, in addressing the climate crisis and promoting cooperation among nations.

Overall, the literature review provides a comprehensive overview of relevant studies, scientific reports, and legal frameworks that support the conceptual framework of the study. It establishes the context for understanding the securitization of the climate crisis and the urgent need for effective strategies to mitigate its impacts and ensure global security.

1.2.2 Results

Svante Arrhenius, a Swedish scientist, laid the foundations for understanding the human role in climate change in his 1896 work. While Arrhenius did not explicitly address the modern concept of a "climate crisis," he recognized the greenhouse effect and hypothesized that changes in atmospheric CO2 levels could affect Earth's climate. Arrhenius also noted the link between human activities, particularly the burning of fossil fuels, and the rise in CO2 levels.

Nearly a century later, the climate crisis has entered the agenda of international relations as a problem requiring urgent action due to the increase in relevant scientific studies and proof of its urgency. For this reason, the study takes securitization analysis

as a reference and examines the securitizing moves made since the emergence of the theory. The methods outlined in 'A Security Framework,' which is presented as a source for this purpose, are suitable.

Barry Buzan, Ole Waever, and Jaap de Wilde (1998) made a significant contribution to the securitization of the climate crisis with their work, "A Security Framework," by expanding the understanding of security beyond traditional military concerns. Buzan, along with his colleagues Ole Waever and Jaap de Wilde, advocated for a broader perspective on security analysis that includes social dimensions. This framework challenged the dominant notion of security that focused exclusively on state-centered military issues and recognized the climate crisis as an urgent security concern.

By incorporating climate change into the field of security analysis, Buzan's framework influenced policymakers and researchers to view climate change as a significant threat to national and global security. It also provided a theoretical basis for examining the securitization process and understanding the role of actors in framing climate change as a security issue.

At the time of publication, this study identifies the environmental sector as a security issue but does not provide clarity about its securitization. Increasing scientific studies and the work of the United Nations, as the main securitizing actor of the climate crisis, reveal that the problem is being securitized step by step. The IPCC reports published by the United Nations constitute the most comprehensive and evidential sources in terms of awareness of the climate crisis and chronological evaluation of the security stages.

The Intergovernmental Panel on Climate Change (IPCC) has shaped the international debate on human-induced climate change since 1988. It has developed a unique methodology for assessing the scientific knowledge base for policymaking and has designed its reports for use by governments. The data analyzed in the IPCC Reports are characterized as high, medium, and low evidence/consensus. This makes it easier for governments to prioritize higher-priority issues on their political agenda, especially those that are regionally relevant to them. Understanding the process is facilitated by the fact that security risks are increasing each year and are supported by recommendations appropriate to the stages of securitization.

The IPCC (2012) report highlights the impact of anthropogenic factors, particularly increasing greenhouse gas concentrations, on the changing climate extremes observed since 1950.The report raises challenges for disaster risk management and adaptation at local and national levels, emphasizing the importance of disparities in local coping and adaptive capacity.

Framing coping with disruptive weather and climate events as a decision-making challenge under uncertainty, the report sheds light on losses from extreme events, exposure, vulnerability, adaptation options, the role of sustainable development and specific case studies. Building on previous work, the report combines expertise from the disaster risk management and climate crisis communities, with a particular focus on prioritizing disaster risk management and adaptation efforts.

The 2013 IPCC report, "Climate Change 2013: The Physical Science Basis", provides a concise and comprehensive review of the scientific understanding of climate change. It establishes a high 95% confidence level among scientists that human activity is the primary driver of the observed warming since the mid-20th century.

IPCC (2013) emphasizes that the climate system is undergoing unprecedented changes, including atmospheric and ocean warming, melting snow and ice, rising sea levels and increasing concentrations of greenhouse gases. Focusing on the urgency of addressing the risks associated with exceeding a temperature rise of 2 degrees Celsius, the report highlights the long-term nature of climate change and the need for urgent action. It provides a comprehensive analysis of the physical science underpinnings of climate change, incorporating data from a variety of sources and covering different aspects of the climate system.

By integrating independent scientific assessments, theoretical research and climate model simulations, IPCC (2013) provides valuable insights into past, present and future climate change at both global and regional scales.

The IPCC (2013) provides a sound scientific basis for understanding climate change, emphasizing the important role of human activity in driving global warming. Its comprehensive analysis and clear findings underscore the urgent need for action to mitigate the impacts of climate change and work towards a sustainable future.

IPCC (2014) provides a comprehensive assessment of the risks, impacts and potential benefits associated with climate change. It explores risk models and potential benefits in depth, assesses adaptation and mitigation measures, and examines the requirements, limitations and adaptation factors associated with these measures. The IPCC (2014) acknowledges regional and temporal differences in climate change risks and explores various issues and sectors through human systems and ocean analysis. It highlights the direct and indirect impacts of temperature and precipitation on human populations, crops, ecosystems and global connectivity. The IPCC (2014) emphasizes the intricate interconnectedness of the global system and the need to address the intersections of climate change with other issues.

It also provides insights into economic and societal impacts, focusing on decision-making processes at different scales and sectors. It serves as a synthesis of numerous contributions and special reports aimed at informing policymakers and guiding the establishment of a global agreement to mitigate climate change and work towards a sustainable future.

The IPCC (2018) underlines the urgent and potentially irreversible threats of climate change to human societies and the environment. The 2015 adoption of the Paris Agreement marked a major milestone in the global fight against climate change, aiming to limit the increase in global average temperature to below 2 degrees Celsius and striving for 1.5 degrees Celsius. The report, prepared in response to a request from the United Nations Framework Convention on Climate Change, presents a Special Report examining the impacts of crossing the 1.5 degree threshold and associated greenhouse gas emission pathways.

It emphasizes that human activities are already causing significant warming and that if the current trajectory continues, human-induced global warming could reach 1.5 degrees Celsius by 2040.

The IPCC (2018) framework highlights opportunities for action. It recognizes the diverse impacts of human activities on the Earth and assesses feasibility across multiple dimensions, including geophysical, environmental-ecological, technological, socio-cultural and institutional aspects. Emphasizing the urgency of the situation and the importance of concerted efforts, the report serves as a vital resource to guide effective action to mitigate climate change and achieve a sustainable future.

The IPCC's Special Report on Climate Change and Land (2019) provides a comprehensive review of the land-climate system and its consequences. IPCC (2019) consists of seven chapters covering various aspects of the topic. It begins by providing an overview and basic definitions based on previous research. The dynamics of the land-climate system are explored, focusing on the relationship between climate change and soil processes. The vulnerability of global populations to drought, desertification and climate change impacts is addressed, as well as potential strategies to address these challenges.

The IPCC (2019) highlights the urgency of tackling land degradation and emphasizes that trends can be reversed through restoration and improved land management. It examines food security and its link to climate change, emphasizing the importance of adaptation and resilience-building measures. Solutions to address desertification, land degradation and food security are outlined and a roadmap for effective action is provided. The IPCC (2019) also addresses decision-making processes and policy responses within the climate-land-human system.

Alarming findings reveal that land warming is accelerating, outpacing the global average temperature increase. Aiming to inform policymakers, stakeholders and the global community about the urgent actions needed for sustainable land management, climate change mitigation and food security for future generations, the report underlines the need to address the complex interplay between climate change and land systems.

The IPCC (2021) report presents a comprehensive assessment of the scientific basis for climate change, drawing on a wide range of evidence-based research. It confirms that human activities are the primary driver of rapid and profound changes in the global climate system. The IPCC (2021) highlights ongoing and widespread changes in every component of the climate system, with impacts spanning millennia.

These changes include ice loss, ocean heat patterns, sea level rise and deep ocean acidification. The report emphasizes the need for urgent and ambitious action to address the global climate crisis, serving as a vital resource for policymakers, scientists and society as a whole.

The IPCC (2022) report on Impacts, Adaptation and Vulnerability provides an improved technical understanding of climate change and its consequences. It

recognizes the increasing intensity of extreme events, particularly in the context of the intersection between climate change and pandemics. The report emphasizes the critical role of adaptation in promoting climate-resilient development and integrates environmental, social and economic sciences.

It emphasizes the importance of social justice, diverse knowledge systems and urgent action. The report identifies the risks associated with climate change impacts, considering the exposure and sensitivity of human communities and natural systems. It assesses vulnerability and harmonizes various assessment techniques. Adaptation is defined as adjusting human systems to climate changes and impacts to minimize harm and seize opportunities. The report assesses climate hazards, social responses and future climate change by combining findings from climate model simulations. It details the increasing impacts of climate change on ecosystems, ecosystem services, water and food security, settlements, health, culture and economies.

The report attributes impacts, including extreme events, to climate change with increasing confidence. It highlights the widespread nature of chemical hazards and the interconnectedness of temperature increases, droughts, land use changes and their impacts on communities, human health, ecosystems and food security.

The IPCC's 2022 Report on Climate Change Mitigation provides a comprehensive assessment of the scientific, technological, environmental, economic and social aspects relevant to addressing climate change. It emphasizes an integrated approach that takes into account both climate change and sustainable development, highlighting the involvement of non-governmental and local actors in global mitigation efforts. The report explores the patterns and factors affecting emissions, analyzes short, medium and long-term development and mitigation strategies, and outlines current changes in various sectors. It assesses how mitigation can be accelerated within the framework of sustainable development, taking into account behavior, policy, governance, finance and technology.

The report highlights the need for different policy approaches and the integration of ethical, transition and political frameworks to achieve a low-carbon, climate-resilient and sustainable society. It emphasizes the importance of deliberate planning and decision-making at different levels and the engagement of diverse actors,

including global stakeholders. The report emphasizes the role of non-governmental actors and the broader context in which climate change initiatives are situated.

The IPCC's Sixth Assessment Synthesis Report (2023) highlights the interconnectedness between sustainable development, climate action and the various actors involved in addressing climate change. The IPCC (2023) highlights the significant and rapid changes observed in various Earth systems, which are causing adverse impacts on weather patterns and climate extremes worldwide. Vulnerable communities, especially those least responsible for climate change, are disproportionately affected, exacerbating existing vulnerabilities.

Regions highly vulnerable to climate change, where billions of people live, face increasing risks, including severe food and water insecurity. The report recognizes the progress made in international agreements such as the Paris Agreement and the Kyoto Protocol but warns that there is an "implementation gap" between existing policies and emissions reduction targets. Without significant policy improvements, global warming is projected to reach 3.2-3.5°C by 2100. The report also underscores the need for urgent and ambitious climate action, highlighting the increasing frequency of heatwaves, droughts, and extreme sea-level events.

The IPCC Reports, as comprehensive sources that include up-to-date sources and expert opinions on the security risks of the Climate Crisis, shed light on the legitimization process for policymakers in the securitization process. The legal measures required to control actions on the climate crisis have begun to fall within the scope of international law. Considering the slow pace of legal developments in international relations, this is an important development.

The United Nations First Handbook of International Law (2017) is a comprehensive resource covering various aspects of international law, including treaty law, international human rights law, international environmental law, and international trade and investment law. It emphasizes the role of international law in providing a legitimate and competent basis for security measures, balancing security concerns with the protection of human rights. The handbook promotes cooperation and multilateralism by imposing legal obligations on states to cooperate against common security threats, such as the climate crisis.

In the responsibility context of climate security, the chapters of the handbook on relevant rules of international law, the state and the principle of good neighborliness are particularly important. It emphasizes the importance of state responsibility in securing international law, including respecting the sovereignty and territorial integrity of other states and refraining from the use of force. The principle of good neighborliness reduces the risk of conflict and promotes stability by encouraging peaceful relations between neighboring states.

The Handbook (2017) also covers the law of treaties, which plays a crucial role in international security by providing a framework for agreements between states. By defining legal obligations and rights, treaties allow countries to work together to address common challenges and enhance cooperation, thereby reducing tensions and promoting stability.

Overall, the United Nations Handbook on International Law (2017) serves as a valuable reference for analyzing the security nexus between international law and the climate crisis, offering insights into the principles and treaties that shape international security and cooperation in the face of global challenges.

The third volume of the United Nations Handbook of International Law, published in 2017, focuses on international environmental law and international watercourses. It provides a comprehensive presentation of the principles and frameworks of international environmental law, including the State obligation to protect the environment, the precautionary principle and the principle of common but differentiated responsibilities. The book also covers international water law governing the use and management of transboundary rivers and other watercourses.

Chapter 4 specifically examines International Environmental Law and provides an overview of the subject, providing reference information and anecdotes for a comprehensive understanding.

The book includes important declarations and treaties such as the Declaration of the United Nations Conference on the Human Environment and the Rio Declaration on Environment and Development. These declarations emphasize the responsibility of states to protect the environment, promote sustainable development and encourage collective action to address environmental challenges. The Rio Declaration in particular emphasizes the central importance of people in sustainable development and

environmental protection, recognizing the right to development, poverty reduction and the role of women.

The book also covers in detail the major agreements on atmospheric protection and climate change, including the Kyoto Protocol, the Paris Agreement and the Convention on Biological Diversity. It summarizes the evolution of these agreements and the reporting obligations of the parties involved. Signed in 2015, the Paris Agreement aims to limit global temperature rise and strengthen the global response to climate change.

The book emphasizes the importance of international law in promoting friendly relations, cooperation among nations, and international peace and security. Overall, the third volume of the United Nations Handbook of International Law provides valuable information on international environmental law and the legal frameworks governing international watercourses, offering a comprehensive reference for understanding the principles, treaties and obligations related to environmental protection and sustainable development.

2. REDEFINING GLOBAL POLITICS : THE IMPACT OF THE CLIMATE CRISIS ON INTERNATIONAL RELATIONS

2.1 Understanding the Historical Process of the Climate Crisis

The term climate crisis or climate change pertains to enduring alterations in global temperatures and weather patterns. While some fluctuations can occur naturally due to changes in solar activity or volcanic eruptions, the primary driver of climate change since the 1800s has been human activities, particularly the burning of fossil fuels such as coal, oil, and gas. “The combustion of these fossil fuels releases greenhouse gas emissions, which act like a blanket around the Earth, trapping the sun's heat and leading to a rise in temperatures. Carbon dioxide and methane are among the key greenhouse gases contributing to climate change” (United Nations, 2023).

The recognition of climate change as a security issue is founded upon extensive scientific research and evidence amassed over several decades. One of the early predictions regarding the impact of human-induced climate change was made by Nobel Prize-winning chemist Svante Arrhenius. “He was the first to quantify the effect of changes in atmospheric carbon dioxide (CO2) concentration on the Earth's surface temperature. The subsequent increase in surface temperature resulting from CO2 and other infrared-absorbing gases in the atmosphere became known as the greenhouse effect (GE)” (Rodhe, Charlson, & Crawford, 1997). As early as 1896, Arrhenius published the first human-made forecast of global temperature change, marking a significant milestone.

Approximately a century after the initial predictions highlighting the human-driven disruption of the world's climate balance, the establishment of the Intergovernmental Panel on Climate Change (IPCC) by the United Nations and the World Meteorological Organization in 1988 marked a pivotal step in evaluating scientific knowledge on climate change. The formation of the IPCC aimed to assess and consolidate the growing body of scientific research, rendering climate change a high-priority issue and

a prominent topic on the global agenda. Through numerous reports and ongoing scientific investigations, the evidence supporting the existence of a climate crisis has only become stronger, shedding light on the potential security issues it poses (IPCC, United Nations, World Meteorological Organization).

Understanding the historical process of the climate crisis is crucial for comprehending the profound impact of human activities on our planet's climate system. As highlighted by scientific research and evidence, the combustion of fossil fuels and the subsequent release of greenhouse gas emissions have disrupted the delicate balance of the Earth's climate. The recognition of climate change as a security issue has prompted global attention and the establishment of organizations like the IPCC to evaluate and address this critical challenge. It is imperative that we continue to heed the warnings of scientific experts and take decisive action to mitigate the effects of climate change, safeguarding the well-being of current and future generations.

2.1.1 Causes and Origins of the Climate Crisis

The recognition that human activities can have significant impacts on the climate system has emerged towards the end of the century, leading to a deeper understanding of the climate crisis. Primarily caused by human activities, the climate crisis is characterized by the release of greenhouse gases into the atmosphere, resulting in global temperature increases and associated effects.

Greenhouse gas emissions stem from various sources, with the combustion of fossil fuels such as coal, oil, and natural gas in electricity generation, transportation, and industrial processes being a major contributor. Among these emissions, carbon dioxide (CO2) released from fossil fuel combustion stands as the primary driver of anthropogenic climate change. As emphasized by Sommer (2016), “the concentration of CO2 in the atmosphere has risen from approximately 270 parts per million (ppm) over the past 7,000 years to 400 ppm today. Alarming projections suggest it could reach 1,000 ppm by the end of this century”.

Deforestation, including activities like agriculture, logging, and urbanization, also plays a significant role in the climate crisis. Particularly in countries with vast tropical forests like Brazil, Indonesia, and the Democratic Republic of the Congo, deforestation contributes substantially to human-made greenhouse gas emissions. Forests act as

natural carbon sinks, absorbing roughly one-third of the carbon dioxide emitted annually by vehicles, power plants, and factories. However, when forests are cleared, they not only lose their capacity to absorb carbon but also release stored carbon into the atmosphere. “Addressing deforestation, or ‘preventing deflation’, has gained recognition as a potentially cost-effective approach to reducing greenhouse gas emissions” (Greenberg, 2015).

Furthermore, changes in land use, including the conversion of forests into agricultural land, diminish the Earth's capacity to absorb CO2 and exacerbate emissions. Agricultural activities, such as rice farming, livestock farming, and the use of synthetic fertilizers, contribute significantly to greenhouse gas emissions. “The livestock sector alone accounts for 45% of emissions related to animal feed production, processing, and transportation, with 65% of the sector's total CO2 emissions attributed to feed and milk cattle”(McCormack, 2021). Additionally, land use change, especially the transformation of forests into wetlands, accounts for a significant portion of emissions.

Industrial processes like cement production, steel production, and chemical manufacturing also release substantial amounts of greenhouse gases into the atmosphere. “In developing countries, waste generation has been on the rise due to economic growth, leading to increased greenhouse gas emissions from the waste sector as waste collection expands and landfill usage intensifies” (Sang-Arun, 2011).

The burning of fossil fuels and the use of inefficient energy production technologies are major contributors to climate change. Emissions from industrial and residential sectors, such as the use of coal for heating and cooling, contribute to air pollution and greenhouse gas emissions.

It is important to recognize that these causes of the climate crisis are interconnected and often reinforce each other. The cumulative impact of human activities on the climate system has resulted in a range of consequences, including rising temperatures, extreme weather events, sea-level rise, biodiversity loss, and ecosystem degradation. Addressing these causes necessitates global action, including the transition to clean energy sources, the promotion of sustainable land use practices, the adoption of circular economy principles, and the implementation of effective policies and

regulations to reduce greenhouse gas emissions. By undertaking these measures, it is possible to mitigate the climate crisis and work towards a more sustainable future.

2.1.2 Historical Development of the Climate Crisis

Svante Arrhenius, who revealed that “the climate crisis could lead to global warming as a result of man-made greenhouse gas emissions” (Arrhenius, 1896), has also paved the way for scientific consensus.

In 1972, a group of scientists, educators, economists, sociologists, industrialists, national and international workers published a report entitled ‘The Limits to Growth’ by the Club of Rome. This study is considered the first global model in terms of bringing together the world economy and the environment. It highlights "the impossibility of unlimited growth with limited resources" (Meadows, 1972).

In the same year, the first UN Environment Conference was held. Despite the different economic, social, cultural, and ideological structures, the entire world came together to examine environmental problems and solutions from a global perspective. The conference emphasized “the idea that environmental problems are global in nature and that responsibility is shared by all” (Sohn, 1973). It also highlighted the role of development in improving the standards of living in countries and emphasized that environmental protection does not hinder development. The Stockholm Environment Conference is seen as a significant turning point in addressing the issue of climate change.

As part of the efforts to address environmental concerns, the United Nations Environment Programme (UNEP) was established. One of its priority objectives was the protection of the Mediterranean. In 1974, “the draft Mediterranean Action Plan (MAP) was prepared, and the Regional Maritime Programme Activity Center was established to promote cooperation and address environmental issues in the region” (UNEP, 1974).

The plan, which aims to address environmental problems in the Mediterranean region through an interdisciplinary and holistic approach and promote regional cooperation, “has evolved into a comprehensive plan for sustainable development after the Rio Conference in 1992, shifting its focus from solely addressing marine pollution” (Bayır, 2012).

In 1983, the World Commission on Environment and Development (WCED) was established under the leadership of Norwegian Prime Minister Gro Harlem Brundtland. The commission was created to explore the interconnection between environment and development, driven by concerns regarding the sustainability of environmental resources. In 1987, a group of representatives from various countries produced a report titled 'Our Common Future'. The United Nations Sustainable Development Report defines sustainable development as meeting the present needs without compromising the ability of future generations to meet their own needs.

"The work carried out in the implementation of the Stockholm Conference and the Our Common Future Report, though more limited and theoretical, laid the groundwork for the United Nations Conference on Environment and Development (UNCED) held in Rio de Janeiro in 1992" (Aksu, 2011).

The United Nations Framework Convention on Climate Change (UNFCCC) was signed on May 9, 1992, in New York and entered into force on March 21, 1994, with the participation of 194 countries, including the United States and Australia. This agreement represents the first concrete international step in combating climate change. "Its primary objective is to stabilize greenhouse gas emissions such as CO2 and CH4 at a level that prevents dangerous anthropogenic interference with the climate system" (UNFCCC, 1992).

At the Stockholm Conference, the United Nations Economic and Social Council was established with the aim of promoting sustainable economic development. "The conference emphasized the need to strengthen the work of organizations such as the UN Environment Programme (UNEP) and the UN Development Programme (UNDP) through collaboration with regional economic councils within the UN" (Kayhan, 2011).

During the Stockholm Conference on Climate Change, five key documents were presented. The Rio Declaration underscores the commitment to the principles discussed at the Stockholm Conference, including the establishment of global partnerships between countries and societies to integrate environment and development systems, protect common interests, and foster international agreements. "The declaration also highlights the interconnected nature of the world as our shared living space" (UN, 1992). Although the Rio Declaration consists of 27 principles, it

does not possess legal bindingness; however, it carries political obligations for countries.

“Agenda 21 outlines principles and actions formulated in the 2000s to address environmental and developmental challenges, including the Sustainable Development Goals” (UN, Agenda 21, 1992).

“The United Nations Framework Convention on Climate Change (UNFCCC), which came into force in 1994, establishes the institutional framework for sustainable development alongside the Convention for the Conservation of Biological Diversity and the Declaration on the Preserve of Forest Presence”(UNFCCC, 1992). The UNFCCC is crucial in addressing climate change and serves as a foundational text for the process.

Under the Rio Climate Change Framework Convention, countries are required to take measures to reduce greenhouse gas emissions. Three years after the Convention came into force, in 1997, the governments of the United Nations signed the Kyoto Protocol at a meeting in Kyoto, Japan, within the UN Framework Convention on Climate Change. “The Kyoto Protocol is considered the most comprehensive environmental cooperation agreement ever signed” (Aksu, 2011).

“The 13th Conference of the Parties was held in Bali in 2007. At this conference, the parties agreed to negotiate and sign a new agreement on climate change before the end of the Kyoto Protocol in 2012” (IKV, 2013).

In the early 2000s, there was no clear division between developed and developing countries in terms of differing opinions and interests. “All countries were responsible for reducing greenhouse gas emissions by 5.2% below 1990 levels between 2008 and 2012” (Ulueren, 2001).

On December 12, 2015, the United Nations Framework Convention on Climate Change adopted the Paris Climate Agreement, which is more comprehensive than the Kyoto Protocol. One year after its signing, the agreement entered into force in November 2016. The Paris Climate Agreement is significant because it will bring fundamental changes to local, national, regional, and global economies, societies, and the environment.

“So far, two major global agreements have been signed under the United Nations Framework Convention on Climate Change. The first is the Kyoto Protocol, which is legally binding and primarily focuses on developed countries. The second is the Paris Climate Agreement, which encompasses all parties and is not legally binding” (Ozuyar, et al., 2021).

At the same time, ongoing scientific research is contributing to the recognition and understanding of the climate crisis as a security issue. In 1988, the United Nations Intergovernmental Panel on Climate Change (IPCC) was established by the World Meteorological Organization and the UN Environment Programme to assess the risks of climate change caused by human activities. The IPCC regularly publishes reports that support policymakers in combating climate change.

The development of the Conference of the Parties (COP), where the parties to the United Nations Framework Convention on Climate Change (UNFCCC) gather annually to discuss and decide on actions to address climate change and its impacts, is a significant platform for global engagement today.

COP meetings serve as international workshops to review progress in the fight against climate change, assess compliance with commitments, and shape forward-looking policies. The documents published after these meetings form the foundation for future endeavors.

The historical development of the climate crisis involves a combination of scientific discoveries, international agreements, public awareness, and ongoing research. Advancing scientific understanding is a complex and continuous process influenced by policy responses and societal engagement.

2.1.3 Historical Climate Disasters and Their Significance

The climate crisis, currently recognized as a pervasive global issue, exhibits distinct characteristics attributed to human influence, unprecedented rapidity, and its universal implications. Notably, human activities such as the combustion of fossil fuels, deforestation, and the escalation of greenhouse gas emissions have been identified as key drivers of this crisis. While the effects of climate change historically manifested over extended periods, the present-day climate crisis unfolds within remarkably short timeframes, amplifying its inescapable consequences.

“During the decade of 2006-2015, global average surface temperature (GMST) anomalies registered a noteworthy deviation of approximately +0.87°C (±0.10°C probable range) from pre-industrial levels (1850-1900), with a recent warming trend of around 0.2°C” (IPCC,2018). It is worth highlighting that human-induced global warming had already surpassed the 1°C threshold by 2017, underscoring the urgency of the situation.

Climate change represents a global predicament that reverberates across continents, oceans, and ecosystems, transcending national boundaries and necessitating concerted global cooperation to effectively mitigate its far-reaching ramifications. The concurrent factors of burgeoning population levels and intricate interdependencies exacerbate the vulnerability of a greater number of individuals to the heightened frequency and intensity of extreme weather phenomena such as heatwaves, hurricanes, droughts, and storms.

Furthermore, an expanded exploration of these factors serves to elucidate the fundamental disparities between the present climate crisis and historical climate change. Advancements in scientific knowledge and the advent of cutting-edge technologies capable of assessing climate change risks throughout the course of history have empowered scientists to disentangle the human impact on recent climate fluctuations. By scrutinizing historical climate data and reconstructing past climatic conditions, researchers can discern the discernible imprint of human activities on contemporary climate patterns.

In summary, the contemporary climate crisis diverges significantly from historical climate change due to its human-induced nature, unprecedented rate of progression, and global ramifications. The utilization of scientific advancements and technological innovations facilitates the identification of anthropogenic influences on recent climate variations, underscoring the distinctiveness of the present climate crisis.

2.1.4 Implications of the Climate Crisis for State Behavior

In light of the compelling argument that the climate crisis is a result of human activities, the impact of government policies on this global problem assumes paramount importance. States play a crucial role in both contributing to and addressing the climate crisis. The magnitude of state economies is particularly significant in terms of their influence on the impacts of the climate crisis. Given that greenhouse gas

emissions, the primary driver of the climate crisis, are closely tied to energy consumption and industrial processes, state policies in these domains hold direct relevance to the issue. Moreover, the impacts and levels of responsibility for the climate crisis vary greatly between developed and developing countries.

"Considering the differentiated responsibilities for climate change and the role of states in safeguarding the climate system for the benefit of current and future generations, it is not surprising that international policy and legal responses to climate change take equality concerns into account" (Knight, 2014).

Climate change operates within an already complex system characterized by global, national, regional, and local dynamics that deeply affect states and individuals. The implications of climate change encompass population growth, migration, globalization, intergovernmental and intra-national conflicts, and health impacts. On these matters, states possess the power to implement policies and regulations that can either mitigate or exacerbate the climate crisis.

States have proven to be effective in reducing greenhouse gas emissions through various legal measures, including carbon pricing, renewable energy targets, energy efficiency standards, and emission reduction commitments. Concurrently, states tend to engage in international cooperation to ensure global peace and security. "'International cooperation' is defined as the process of adjusting actors behavior in accordance with the actual or anticipated preferences of others" (Ciplet, 2015).

The sluggish progress in further advancing the international climate regime indicates the urgent need for actions that complement and surpass international climate negotiations. In recent years, climate change has gained increasing prominence among foreign policymakers, reflecting its growing importance on the international agenda.

"The rise in extreme weather events and mass migration resulting from climate change can potentially lead to conflicts stemming from water and food shortages. Weak and fragile states, which already possess limited political capabilities, are considered particularly vulnerable"(Tänzler & Carius, 2013). It is widely recognized that the further weakening of key public services could lead to national and regional destabilization, accompanied by social and political tensions that may escalate into violent conflict. Furthermore, countries with low capacity for adaptation, including many vulnerable states, are expected to bear the brunt of the climate crisis.

Hence, cooperation between states becomes crucial for sharing policies, transferring technology, and mobilizing financial resources to support climate action, particularly in developing countries. Expanding the use of peace and conflict assessments that account for the impacts of climate mitigation and adaptation activities can be an effective strategy.

A report published in March 2008 under the German presidency of the EU highlights the potential exacerbation of vulnerability and radicalization due to climate change-induced environmental stress and insufficient coping capacity. “The impacts of climate change on international security are acknowledged as part of the broader EU agenda on climate, energy, and common foreign and security policy”(Tänzler & Carius, 2013). In response, the EU has focused on developing early warning capabilities and promoting dialogue and common awareness in relevant international forums.

Methods of international cooperation and diplomacy involve diplomatic efforts to bridge differences between states, resolve conflicts, and foster consensus on climate-related issues.

The principle of common but differentiated responsibilities, as enshrined in the Rio Declaration on Environment and Development, holds promise for achieving an effective international agreement on climate change. “This principle recognizes the shared but unequal ongoing responsibility of protecting the global commons” (Weijers, et al., 2010).

“Developed countries undertake to allocate financial resources to assist developing countries in their reduction and adaptation efforts” (UN Handbook, 2017), thereby aiding vulnerable states in navigating the climate crisis through funding support.

States can also provide support by enhancing their capacity in internal policy processes for emissions reduction, compliance measures, and resilience efforts. Climate change-related initiatives by civil society organizations and municipalities can benefit from state support. States can invest in research and development to advance climate science, technology, and innovation. They can fund scientific work, establish research institutions, and encourage private sector investment in clean technologies.

Collective efforts and global cooperation among states are essential to effectively address the climate crisis and implement sustainable development policies.

2.1.5 The Climate Crisis as a Catalyst for International Relations

Indeed, the climate crisis is inherently intertwined with the field of international relations for several key reasons. The relationship between the climate crisis and security issues, recognized within the realm of international relations, has been explored in the report published under the German presidency of the EU in March 2008.

The effects and responses to climate change extend beyond national boundaries and impact the entire globe. The changing climate, exacerbating regional and local tensions, can accelerate instability and give rise to a range of interconnected problems such as water scarcity, food shortages, and overpopulation.

A critical aspect of the climate crisis is that it can create a self-perpetuating crisis if there is no international structure in place to prevent its escalation. Addressing the causes and consequences of climate change effectively requires international cooperation and coordination.

Climate change acts as an accelerator of instability in various areas, as highlighted by experts. Security planners need to anticipate and plan for the unexpected impacts of a changing climate. Flexibility and adaptability are crucial in preventing climate change from causing a collapse in security. “Given the interconnectedness of the world, the effects of climate change in one area can have far-reaching consequences in unknown areas elsewhere” (American Security Project, 2012). International Relations is a relevant discipline for identifying and analyzing these security risks.

The climate crisis can trigger rising sea levels, extreme weather events, food and water insecurity, population displacement, and conflicts over resources. “For instance, extreme climate events can lead to large-scale and rapid waves of migrants, which can strain the capacity of target countries and potentially increase the likelihood of conflict” (Cattaneo & Bosetti, 2016). The transboundary nature of these impacts necessitates detailed analysis and international cooperation.

The field of international relations provides a platform for negotiations, agreements, and frameworks to address climate change issues and generate a global

response to the crisis. Examples of such frameworks include the United Nations Framework Convention on Climate Change (UNFCCC) and the Paris Agreement. These agreements establish a framework for consultation, cooperation, and accountability among countries in combating the climate crisis. They facilitate the coordination of efforts to address the dynamic and global nature of the climate crisis, promote information and resource sharing, and shape norms and rules.

2.2 The Climate Crisis as a New Security Paradigm in the Post-Cold War Era

Climate change has been incorporated into the field of international relations after it has been proven to have been caused by human hands. Changes in security approaches during the post-Cold War period have led to an examination of the climate crisis from a security perspective. Academics and policymakers have begun to acknowledge the international and global nature of environmental problems, including climate change.

Before the Cold War, scientific understanding of climate change and its causes was still developing. While early scientific studies on the greenhouse effect and climate change were being conducted, a comprehensive understanding of man-made climate changes later emerged. After the Cold War, developments in climate science, such as the Intergovernmental Panel on Climate Change (IPCC) assessments, have provided a clearer understanding of the link between human activities and the climate crisis.

Geopolitical competition and the arms race were on the agenda until the end of the Cold War in the history of international relations. The World Summit in 1992 and subsequent climate talks helped raise the climate crisis as a priority on the international agenda.

The concept of security until the post-Cold War period was evaluated together with the concept of military security. The period of the Cold War between the US and the USSR, which caused major security doubts, forced all actors into a process of change. With post-Cold War social, political, and environmental issues beginning to be perceived as security threats, the expected change in security paradigms has taken place.

On the other hand, in the post-1990 period, along with the differentiation of security concepts, it entered a transformation process that expressed innovation in its activities

in order to maintain the presence of the technically disappeared NATO. The end of the Cold War period and the breakup of the main threat element of the Soviet Union directly affected NATO's security perception.

In 1991, when the Warsaw Pact officially disappeared, NATO established the New Strategic Concept. In conjunction with this concept, "ethnic clashes, the spread of weapons of mass destruction, incidents that may arise in the world's energy flow, and terrorist acts are regarded by NATO as threatening its own security" (Sezik & Agır, 2016). The process of incorporating new areas of economic, environmental, social, etc., into the security scope of military security is expressed as the "expansion" of the security concept.

It was born out of dissatisfaction over the intense narrowing of the field of security research imposed by the military and nuclear forces of the Cold War. This dissatisfaction was initially promoted by the rise of economic and environmental agendas in international relations in the 1970s and 1980s, and then by increased concerns about identity issues and cross-border crime in the 1990s. "The problem-focused expansion eventually triggered its own response and created a defense to limit security efforts to issues that focus on the threat of power or the use of power" (Buzan, Waever, & Wilde, 1998).

But after the Cold War, there was a paradigm shift to recognize the interdependence of security, environment, and sustainable development. This change has led to the investigation of security frameworks where the climate crisis has begun to be framed as a security issue.

As a result of the changes and transformations in the international system after the Cold War, while maintaining the priority of "nation-state security" in the strategic security framework, new issues related to security such as "human/individual security," "terrorism," and "environmental and climate issues" have also started to gain importance. In light of developments since 1994, the United Nations Organization has also pointed out in its UN Human Development Report that "security emphasizes people's security rather than domestic (territorial) security and that security can be achieved not through weapons, but through sustainable human development" (UN, 1994).

Before the Cold War, global climate governance was limited, and there were only a few international agreements addressing environmental issues. However, after the Cold War, environmental agreements that resulted in the establishment of the UNFCCC in 1992 increased. Since the mid-2000s, the scope of climate diplomacy activity has re-expanded and deepened due to the need to respond to the increasing impacts of climate change and drive the growth of a low-carbon economy. For example, international discussions on the impacts of climate change on safety were first held at UNSC in 2007 and were regularly followed up at UNSC.

"These discussions have put climate change on the agenda of non-traditional actors such as the security community" (Mabey, Gallagher, & Born, 2013). The empowerment of new actors and advocates is necessary to expand the legitimacy and credibility of the climate crisis within the new security paradigm.

In 2015, the adoption of the Paris Agreement emphasized a global commitment to address the climate crisis and climate targets. The conclusion of a comprehensive international agreement on a non-military security issue is another indicator of changing dynamics.

The climate crisis has transformed the problem from a relatively newly emerging issue with limited interest and knowledge during the Cold War to a recognized global challenge requiring urgent action in the post-Cold War period. Scientific developments, paradigm shifts in international relations, globalization, public awareness, and policy responses have all contributed to this transformation in perception.

2.2.1 Securitization of the Climate Crisis : Redefining High Policy

States engage in a high-level political and strategic decision-making process to safeguard their territorial integrity, ensure stability, and survive against potential threats from other states or non-state actors. "Like the meaning of the word security, its political significance is an idea that is constantly changing over time" (Rotschild, 1995).

During the pre-Cold War period, High Policy was expressed as military issues and concerns that were accepted for the preservation of state sovereignty. Security can be

defined as efforts to protect states, societies, and individuals from internal and external threats that endanger their well-being and survival.

In the context of the post-Cold War period, the definition of high politics expanded to include the broader dimensions of global governance, economic interdependence, human rights, and environmental challenges. This shift reflected the acceptance that traditional military security concerns are no longer the sole or determining element of international relations.

Today, the boundaries of security have shifted from political geography to local, regional, national, international, multinational, supranational, and transnational spheres. “The derivatives of security continue to be discussed individually, socially, economically, environmentally, administratively, militarily, diplomatically, and politically” (Algan, et al., 2020).

Changes in security approaches are the result of the restructuring of international relations after the end of the Cold War and a shift in global political priorities. It includes a new search for what constitutes important and central issues in international politics. This quest has led to an increasing emphasis on non-military security issues such as environmental degradation, climate change, transnational crime, terrorism, epidemic diseases, and migration.

On the other hand, increasing scientific, political, and military outcomes on the adverse effects of environmental degradation in the light of technological developments have led to a search for a more comprehensive security concept on the climate crisis.

The integration of environmental issues into security approaches has been accompanied by the Copenhagen School's work. The Copenhagen School, founded by Barry Buzan, Ole Waever, and Jaap de Wilde, has not only been a state-focused approach to security, as in traditional security theories. While addressing security in this context, they have opposed “the definition of military issues as high-policy and environmental issues, as well as security threats such as migration, climate, and diseases, as low policy” (Buzan, Waever, & Wilde, 1998)

“How could the security complex theory be blended with the broader agenda of security research that covers not only traditional military and political sectors, but also

economic, social, and environmental sectors?" Asking the question (Buzan, Wæver, & Wilde, 1998) a new paradigm for defining security in a multipolar system has been unveiled. One of the breakdowns of the climate crisis has occurred at this point.

"By suggesting that economic factors are more important in explaining the dynamics of the international system, the distinction between 'high politics' and social and economic issues, which includes realist foreign policy, war, and peace, has disappeared" (Polat, 2020).

"Environmental security defines a way to address environmental issues where environmental threats are seen as urgent and requires a quick response at the highest political level" (Grease, 1996).

When concerns about the environment become part of 'lower politics', when it loses political importance and agenda, the problem becomes left to itself. The characterization of the problem as a high policy helps to trigger feelings of urgency.

"There has been an attempt to go beyond military manifestations, which are equally important in the changing sense of security, so as to include not only the defense of the region but also the preservation of social, political, and ecological values that are critical to material and psychological well-being" (Camilleri, 1994).

In the 1990s, when the end of the Cold War radically changed the international security structure, the humanitarian security concept emerged in conjunction with the climate crisis. Thus, the international community has become more involved in addressing humanitarian crises as central elements of higher politics, promoting democracy, and advancing human rights. It was first defined in the 1994 United Nations Development Programme in the Human Development Report. Alice Massari (Massari, 2020), in the book Humanitarianism, officially defines "how human security was defined in 2001; 'Human security means creating political, social, environmental, economic, military, and cultural systems that give people the building blocks of survival, subsistence, and honor' (Sen & Ogata, 2003)".

Thus, the second breakthrough in climate change, which is definitely recognized as a humanitarian security issue, has been achieved by international institutions and global governance mechanisms. In line with the new strategies developed by international organizations in the post-Cold War period to preserve international

peace, the climate crisis has been described by international organizations as a high policy. The United Nations, the European Union, NATO, and regional organizations have become central arenas for gaining power and addressing the challenges that could arise with the climate crisis and shaping international relations.

The definition of climate change as a high policy has shaped state interactions, including security concerns, cooperation, conflict, and the formation of alliances. High-level political stakeholders such as climate conferences, agreements, and regional measures often intensify efforts to manage security issues and conflicts, enhance stability, and address common climate crisis threats.

2.2.2 Comparing the Climate Crisis with Traditional Security Challenges

The climate crisis and traditional security issues have undeniable similarities. Both the climate crisis and traditional security issues can have global consequences, with national or international implications. Traditional security issues, such as terrorism, nuclear proliferation, or conflicts, can undermine regional stability and have far-reaching effects beyond national borders. Similarly, the climate crisis, with its interconnected environmental, social, and economic consequences, is affecting the entire planet across national boundaries.

The climate system consists of different bio-physical components that interact to create a more or less favorable environment for social and ecological systems to survive. This complexity is manifested in climate systems at regional and local levels. “The hydrology and weather models of a society, such as flow rates, temperature, rainfall, humidity, cloudy days, degree-days, wind models, and meteorological calendars, produce a unique combination of environmental conditions. Changes in any (or more) of these components will have system-wide consequences” (Imran, 2020).

Climate change has cross-border and interrelated consequences, affecting ecosystems, economies, societies, and human well-being worldwide.

The competition for natural resources has been a driving force in international relations throughout history. Productive land, geopolitical location, and energy resources have influenced the dynamics of the system. Both the climate crisis and traditional security issues have multiple dimensions in this regard. Traditional security concerns encompass dynamic political, military, economic, and social factors.

Similarly, experts argue that climate change has become a key issue in the global transformation of the world order.

New regimes and institutions addressing climate change span a range of fields from science to politics and public movements. Malone (2002) notes, “Many of the globalization debates involving the environment as a subject include climate change on the list of global environmental changes such as the ozone layer, biodiversity, sustainable development, pollution, and ocean overhunting and acid rain”.

Both the climate crisis and traditional security shortcomings have impacts on human safety. While human security is often used synonymously with human rights, it is a complex phenomenon that can change more rapidly than human rights. The threats and risks faced by individuals can vary from person to person and from state to state.

Traditional security issues aim to ensure the safety of individuals and communities and develop sustainable strategies for survival. Similarly, the Intergovernmental Panel on Climate Change (IPCC, 2014) highlights “the need to address climate change as a humanitarian security issue, emphasizing the effects of natural disasters and severe weather events on the physical safety of food, water, and people”.

Both the climate crisis and traditional security issues require international cooperation. It is well-known that security cannot be achieved solely within national borders, and measures and actions must be addressed regionally or globally, in proportion to a country's geopolitical position and economic power. Traditional security issues focus on cooperative efforts between countries to unite against common threats, maintain stability, and prevent conflicts. Similarly, the global nature of the climate crisis drives international cooperation to reduce greenhouse gas emissions, adapt to changing climate conditions, and find solutions at global, regional, and local levels.

On December 10, 1997, after ten days of challenging and controversial negotiations, the Parties to the United Nations Framework Convention on Climate Change adopted the Kyoto Protocol. “The purpose of the Protocol is to prevent dangerous interference with the climate system by limiting the release of greenhouse gases into the atmosphere”(McGivern, 1998). When the Protocol enters into force,

developed countries, primarily in Eastern Europe, will impose emissions reduction obligations on the Parties and the "market economy transitioning" Parties.

The Kyoto Protocol and the Paris Agreement are two key mechanisms that encourage cooperation in adapting to climate conditions.

2.2.3 Unique Aspects of the Climate Crisis and Their Implications for Security

The climate crisis and traditional security issues differ in their scope and approach. While traditional security problems focus on safeguarding national security primarily through military means, the climate crisis introduces a new set of challenges that require a different perspective.

“The last ice age has been marked by a series of major and sudden climate changes. Although numerous evidence has been obtained regarding the magnitude, timing and geographical dimension of these changes, the physics behind them has not been fully understood. While model-based simulations provide useful clues about what lies behind these sudden climate changes, they do not provide convincing evidence that any hypothesis is true” (Broecker, 2003).

Climate change poses long-term risks such as rising sea levels, extreme weather events, and loss of biodiversity. Addressing the climate crisis necessitates comprehensive long-term planning, mitigation, and adaptation strategies. However, due to the complex and interconnected nature of the climate system, predicting outcomes with certainty remains challenging.

In contrast to traditional security issues, the climate crisis demands interdisciplinary approaches and global cooperation. It affects ecosystems, economies, societies, and human well-being worldwide.

“Many of the globalization debates involving the environment as a subject include climate change on the list of global environmental changes such as the ozone layer, biodiversity, sustainable development, pollution, and ocean overhunting and acid rain” (Malone, 2002).

Understanding and effectively addressing the climate crisis requires reevaluating the concept of security. While traditional security approaches prioritize national

security and military matters, the climate crisis compels us to adopt a broader perspective that encompasses the well-being of both humans and the environment.

It's easy for traditional people to identify security issues, holding security in a broad sense together with military matters and the use of force. But it's harder when security moves outside the military sector. "There are intellectual and political dangers of simply linking the word security to a much wider range of issues" (Buzan, Waever, & Wilde, 1998).

To tackle the climate crisis, we must recognize its multi-dimensional nature and consider the interconnections between environmental, social, economic, and political factors. This entails bridging disciplines, fostering collaboration between countries, and developing new institutions and frameworks that can effectively address the challenges posed by climate change.

3. ASSESING THE PROCESS OF SECURING THE CLIMATE CRISIS

The climate crisis has emerged as a result of increased scientific research and the expansion of traditional security approaches in international relations, specifically in the field of environmental security.

“The fundamental logic of environmental security is that, from a global perspective, humanity lives beyond the capacity of the world to carry” (Buzan, Waever, & Wilde, 1998). “The scientific consensus among climate scientists is clear: human activities are the primary cause of climate change” (Romm, 2016). “Human-induced destruction of the environment has disrupted natural cycles essential for regeneration” (Gonenc, 2017).

The global impacts of environmental problems, such as poverty, hunger, climate refugees, and international migration, have made the climate crisis a subject of international relations. Understanding environmental security is crucial, as it highlights the potential consequences of environmental issues and their implications for global order.

It is important to recognize that reversing the climate crisis lies within human power. The issue does not solely involve humanity's struggle with nature but also with the dynamics of its own cultures. It is a civilizational issue that primarily manifests in economic and demographic dimensions and has the potential to affect the degree of order in the international system and its subsystems.

Since the recognition of the climate crisis as a security issue, international actors have been working towards addressing it. Significant efforts have been made, including the establishment of international agreements like the Paris Agreement. However, the climate crisis continues to present a global challenge that requires continuous and collective action from governments, communities, and individuals.

Ongoing efforts aim to reduce greenhouse gas emissions, transition to renewable energy sources, and implement sustainable practices. The success of securing the climate crisis within a framework of continuous commitment, cooperation, and innovation remains a critical question. To address this question, we must assess the concept of securitization and its implications in the context of the climate crisis.

The Copenhagen School framework, analyzed by its authors, offers methods for framing issues, including the climate crisis, as security concerns within the security process. It is essential to note that the framework does not take a definitive position on the climate crisis but provides an objective approach to understanding how the issue can be securitized.

In conclusion, securing the climate crisis requires a comprehensive and multifaceted approach. It demands global cooperation, continuous commitment, and innovative solutions. By framing the climate crisis as a security concern, it can be integrated into the security process and addressed effectively at international, regional, and local levels.

3.1 Understanding Security Theory and Its Relevance

The Copenhagen School of security theory aims to define what constitutes a security problem in international relations, particularly in the context of the post-Cold War era. It argues that security is fundamentally about survival.

According to Barry Buzan and Ole Waever, the security concept developed by the Copenhagen School encompasses a broader agenda that addresses the criticism of inconsistency and seeks to unify the traditional security agenda. It recognizes “security as a multidimensional concept that includes military, political, economic, environmental, and social aspects. By advocating for the application of security to a wide range of issues, it challenges the traditional notion of limiting security to a single sector” (Buzan, Waever, & Wilde, 1998).

Traditional security theory was primarily focused on military policy and was considered adequate for explaining international relations. However, with the end of the Cold War, other significant security issues began to emerge, prompting a debate on the concept of military-political security. The scientific evidence attributing the

Climate Crisis to human activities and the concern over its escalating effects led to the emergence of environmental security as a prominent issue.

Experts acknowledge that identifying security issues is easier in traditional contexts where security is associated with military matters and the use of force. “However, as security extends beyond the military sector, there are intellectual and political challenges in linking security to a broader range of issues” (Buzan, Waever, & Wilde, 1998).

To address these criticisms, security requires framing the problem as an existential threat to a reference object such as the state or society, thereby necessitating extraordinary measures beyond normal politics. “The security process involves three stages: first, actors declare the problem as an exceptional situation requiring urgent action; second, global acceptance and legitimization of the security issue by other actors are crucial; and finally, urgent and exceptional actions are taken to prevent security threats, often involving the allocation of resources” (Buzan, Waever, & Wilde, 1998).

When considering these stages in a broader sense, “the climate crisis has been recognized as a security issue globally, evidenced by its declaration as a security concern by the United Nations and numerous state policies, as well as its inclusion in the Paris Agreement” (Bak, 2017). The Paris Agreement commits signatory countries to limit global warming to below 2°C above pre-industrial levels. Various measures, such as net-zero targets, financing support for developing countries, and modifications to NATO's military structure, demonstrate the application of the three stages of security to address the climate crisis.

Understanding security theory is crucial in comprehending the global impact of issues like the climate crisis. Adopting a broader security agenda helps analyze different sectors, formulate appropriate policy responses, and allocate resources effectively. Climate change necessitates safeguarding the planet on which all actors depend, and thus, breaking down the problem into manageable parts is preferred to simplify analysis and enhance policy implementation.

“If an actor can bypass procedures and rules by emphasizing the priority and urgency of an existential threat, it can be considered a case of security” (Buzan, Waever, & Wilde, 1998). Given the expected transformative effects of the climate

crisis across sectors, societal perceptions, media, and political actions, it is justifiable to examine it through the lens of security. The Climate Crisis and Security section provides further details on this matter.

3.2 The Interplay between High Policy and Security

The process of securing the climate crisis involves the framing and treatment of certain challenges as security concerns, particularly in relation to high politics. “Traditionally, high politics has focused on issues of military security, geopolitics, and power dynamics between states. This emphasis prioritizes actions between states over actions within states” (Olsen, 2017).

“Securitization, on the other hand, refers to the process of elevating an issue to the realm of security, necessitating emergency measures and involving state actors” (Buzan, Waever, & Wilde, 1998). The concept of securitization emerged as a response to the narrow focus on security research during the Cold War, which was primarily driven by military and nuclear concerns. Dissatisfaction with this limited approach grew with the rise of economic and environmental agendas in the 1970s and 1980s, followed by increased attention to identity issues and cross-border crime in the 1990s. The expansion of problem-focused securitization created a defense against efforts to confine security solely to issues related to power and the use of power.

Securitization involves framing a particular subject as a security threat that necessitates exceptional actions beyond normal politics. In the context of high politics, securitization occurs when issues traditionally unrelated to security are framed as security concerns, thereby bringing them into the realm of high policy. For instance, environmental issues like climate change can be securitized by framing them as threats to national security, human well-being, or global stability. This process elevates the importance of the issue and typically involves state actors in the realm of high politics, which entails military strategies and resource allocation.

The security status of topics defined as high politics significantly impacts policy agendas, decision-making processes, and international relations. The European Union (EU), for example, has recognized the importance of climate change in security debates and has implemented policy initiatives to integrate climate-related factors into its foreign and security policies. “The EU's commitment to improving its security

policy and identifying long-term challenges to its strategic interests reflects the recognition of climate change as a threat agent" (Youngs, 2014).

Despite notable progress in addressing the climate crisis, its dynamic nature and shifting short-term agendas make it challenging to prioritize the issue. However, the long-term consequences of the climate crisis highlight its strategic significance. Therefore, it is crucial to situate the issue within the realm of high policy and security considerations.

3.3 Approches to Securing the Climate Crisis : Analysis and Evaluation

The approach of securitization is seen as a way to prioritize climate action, mobilize resources, and involve the security sector in addressing the climate crisis. Securitization involves framing climate change as a security issue that requires urgent action due to its potential impact on survival. "This framing follows a specific rhetorical structure emphasizing the need for immediate action before it becomes too late to address the problem" (Buzan, Waever, & Wilde, 1998).

The theoretical framework of the Copenhagen School, although not specifically focused on the climate crisis, can be applied to understand how climate crises are securitized. Securing the climate crisis involves framing it as a security concern to mobilize political will, resources, and attention. According to the Copenhagen School, securitization is carried out by actors who have the power and authority to identify and shape what is considered a security issue. In the case of the climate crisis, "these actors may include political leaders, policymakers, security agencies, and influential stakeholders" who have elevated climate change to a level of security concern (Buzan, Wæver, & Wilde, 1998).

International organizations such as the United Nations Framework Convention on Climate Change (UNFCCC) play a crucial role in addressing the climate crisis. "The UNFCCC, established in 1992, brings together 196 member states in the annual Conference of the Parties (COP) to negotiate and develop policies to combat climate change" (Guerrero, 20218).

"To secure the climate crisis, it is necessary to convince policymakers, the public, and other stakeholders of the significant security risks posed by climate change"(Zillman, 2007). The Intergovernmental Panel on Climate Change (IPCC)

plays a central role in shaping the global climate change debate through its consensus reports. These reports, based on extensive scientific research, provide a summary of the key findings and policy implications for policymakers. The IPCC reports have had a substantial impact on the international scene and have contributed to increasing interest, financing, and policy actions to mitigate and adapt to climate change.

Securing the climate crisis involves going beyond the normal boundaries of political procedures and justifying urgent measures to address the perceived existential threat. “The UNFCCC's objective of stabilizing greenhouse gas concentrations in the atmosphere reflects the consensus on the need to prevent dangerous interference with the climate system” (Guerrero, 2018).

The political agenda surrounding the climate crisis focuses on the perceived urgency of addressing environmental threats rather than their speculative nature. It also deals with the financial and technological responsibilities of developed countries in supporting climate action in developing nations. “The financing of global reductions and technology transfer is an important aspect of the climate crisis political agenda, guided by the principles of responsibility and capacity” (Pendleton & Simon, 2009).

The work and predictions of actors involved in securing the climate crisis are detailed in Chapter 4, which likely provides specific examples and case studies related to securitization efforts and their impact on policy and action.

4. IMPACTS OF PROJECTED CONFLICTS ARISING FROM THE CLIMATE CRISIS ON GLOBAL STABILITY

The international community's perspective on peace and security has undergone significant changes since the end of the Cold War. While political and military issues remain important, there is now a broader recognition that economic and social problems, such as poverty, epidemic diseases, and environmental degradation, also play a crucial role in threatening global peace.

The climate crisis has emerged as one of the most significant global problems because environmental issues transcend national borders. Developments in one country can have repercussions on neighboring countries and even have global implications. The multidimensional and asymmetric nature of the climate crisis challenges traditional approaches to security, making it difficult to address emerging threats using conventional knowledge and processes.

Traditional security theories are inadequate in explaining the complexities of globalizing problems like the climate crisis. To understand the impact of natural events on national security and borders, it is necessary to adopt a new security perspective that incorporates climate issues. In today's interconnected world, problems such as war, famine, seasonal changes, or migration in one region can have far-reaching effects on countries on the other side of the globe.

Rising sea levels and drought are identified as the two primary factors increasing the risk of conflict and political instability. The Intergovernmental Panel on Climate Change reports that “around 200 million people are currently directly exposed to the consequences of desertification” (Wolf, 2007). Melting glaciers, driven by rising temperatures, contribute to rising sea levels. “If all glaciers were to melt, the sea level could rise by about 70 meters, and the melting of Greenland's glaciers alone could raise the world's seas by 7 meters” (Alley et al., 2005; Morlighem et al., 2017).

“Coastal areas, where more than 200 million people reside, are particularly vulnerable, with approximately 2 million square kilometers of land being just 1 meter above sea level. Bangladesh, for example, with a quarter of its population living in coastal basins, faces problems like salting agricultural land and pollution of water resources due to rising sea levels. Islands in the Indian and Pacific Oceans are also directly affected, with migrations occurring from many islands to more habitable areas, such as in the Maldives” (Tarım, 2019; Naser, 2011).

The increasing global population and demand for resources raise the risk of conflicts over natural resources. Demographic pressures, urbanization, unequal access to land, land scarcity, and resource depletion significantly impact the stability of both rural and urban environments. “Conflicts can arise when local demand for resources surpasses existing supply or when the use of one resource puts pressure on others” (Halle, 2009).

The international community has recognized the role of natural resources and the environment in preventing, warning about, and achieving peace. Dealing with conflicts has evolved in response to this changing security landscape. Incorporating natural resources and environmental considerations into conflict resolution processes has become increasingly important. “While traditional security research tends to be single-sectoral, adopting a multi-sectoral approach allows for a broader framework that combines the lessons learned from different sectors” (Buzan, Waever, & Wilde, 1998). This approach aligns with the UN Security Council's first debate on climate change and its effects on international security in 2007.

The climate crisis poses significant challenges to global stability. Rising sea levels, drought, resource conflicts, and environmental migration are key factors increasing the risk of conflict and political instability. Adapting to this changing security landscape requires adopting new security perspectives and integrating natural resource and environmental considerations into conflict resolution efforts.

The Council of Europe recognized the impact of climate change on international security and called for a joint report from the High Representative and the European Commission in 2008. The report outlined several forms of conflict that could arise due to climate change, as well as the potential exacerbation of existing conflicts:

1. “Resource conflict: Climate change contributes to problems such as limited arable land, water shortages, depletion of food and seafood resources, floods, and droughts. These issues, particularly in industrialized countries, can lead to food insecurity, rising food costs, and conflicts over limited resources. Politicized access to resources can further escalate these conflicts. Coastal cities and critical infrastructure are also at risk due to rising sea levels and increased frequency of natural disasters. Coastal regions such as the eastern coasts of China and India, the Caribbean, and Central America will be particularly affected.
2. Land Loss and Border Disputes: Rising sea levels can result in the loss of coastline and submergence of important areas, leading to regional losses for nations, including small island states. This can give rise to disputes over sea and land borders and other territorial claims. Resolving these disputes may require a review of existing principles of international law, particularly the Law of the Sea.
3. Environmental Migration: Climate change impacts can lead to increased internal movement within countries as well as cross-border migration. Vulnerable populations already facing health issues, unemployment, or social isolation are more susceptible to the consequences of climate change, which can further drive migration.
4. Vulnerability and Radicalization: Climate change can significantly increase instability in weak or failing states, as governments with limited capacities struggle to address climate-related challenges. This can lead to social and political unrest, contributing to radicalization and further exacerbating security concerns.
5. Tensions Related to Energy Resources: Access to and competition for control over energy resources, particularly hydrocarbons, have been significant sources of conflict. Given that many hydrocarbon reserves are located in regions vulnerable to climate change and that these regions already face social, economic, and demographic problems, instability in these areas is likely to worsen. This can lead to increased competition and energy insecurity”.

The Council of Europe plays a key role in defining climate change as a security issue within the United Nations. Recent developments, such as the Climate Summit (COP), the Kyoto Protocol, and the Paris Agreement, highlight the political dimension of climate change. The climate crisis is viewed as a long-term security problem that can increase the risk of conflicts and necessitate precautionary measures. Key security risks identified by experts include border disputes, migration, energy resources, resource shortages, social pressures, and humanitarian crises.

4.1 Border Disputes : Climate Crisis and Territorial Challenges

When examining various practices and academic studies on border security, it becomes evident that there is no universally agreed-upon concept of borders and border safety. Instead, the notion of border security is shaped by diverse factors such as threat perceptions, geopolitical positioning, historical context, political, economic, and social conditions, as well as power dynamics and security strategies.

Geographical characteristics play a significant role in determining state policies. The physical and geographical conditions of countries have a profound influence on their domestic and foreign policies, as well as their economic and social development. “According to international law, a state is defined as the amalgamation of a human community and the elements of political governance residing within specific territorial boundaries” (The Commercial, 1989).

In the pre-Cold War era[1], possessing vast territories was seen as a crucial element of a strong state. However, as highlighted in previous sections of this study, the post-Cold War period witnessed a shift in power and security dynamics due to various sources or factors.

Factors such as productive land, water resources, maritime boundaries, geopolitical advantages, and the pace of economic development contribute to a state's power. Two

[1] Throughout the earliest civilizations, communities that held significant power on Earth consistently gravitated towards land areas that provided them with distinct advantages over their surroundings. Notably, trade routes like the Silk Road and the King's Road have played influential roles in shaping state borders.

However, in contemporary international relations, energy reserves have emerged as crucial determinants of power and security objectives. Additionally, climate, as an essential factor in the sustainability of civilizations, is a fundamental requirement for the existence of states. The roles and positions of states in international relations are fundamentally shaped by the geographical positions and characteristics that can be generalized.

significant manifestations of the climate crisis, namely drought and rising sea levels, present various security challenges in both the geopolitical and economic spheres. “Climate change exacerbates soil degradation, particularly in low-lying coastal regions, river deltas, dry areas, and permafrost regions” (IPCC, 2022).

Given the diversity and risks associated with these challenges to border security, there is a need for a border safety system that takes a reasonable and rational approach from a broader perspective. The Copenhagen School emphasizes local security risks in discussions on border security. It often underscores the proximity of military-political threats, highlighting the close relationship between uncertainty and the sources of threats. “States rely on their immediate surroundings for security as people tend to perceive dangers more prominently from neighboring countries rather than distant Powers” (Buzan, 1990).

The concept of border security lacks a universally accepted definition and is shaped by a range of factors including threat perceptions, geopolitical context, historical factors, political and economic conditions, and power dynamics. Geographical characteristics and the consequences of the climate crisis further influence the understanding of border security. Given the diversity and risks associated with these challenges, a comprehensive and rational approach to border security is necessary.

The Copenhagen School's emphasis on local security risks and the proximity of threats provides valuable insights into the discussion. Ultimately, states depend on their immediate surroundings for security, as neighboring countries are often perceived as more significant sources of danger than distant powers.

According to the European Security Strategy Report, ‘the depletion of natural resources, particularly water, resulting from climate change in the coming decade, will lead to increased instability and migration in various regions’ (European Union, 2009).[2]

[2] According to the report on climate disasters and displacement response by the International Federation of Red Cross and Red Crescent Societies (IFRC) in 2020, “a significant number of people have been internally displaced due to various catastrophes, with climate change and extreme weather conditions being the primary causes. In the span of just six months, approximately 12.6 million people worldwide were displaced, with more than 80 percent of these displacements attributed to climate-related factors. Among the 12.6 million people, 2.3 million were displaced due to conflict, while the remaining 10.3 million were primarily displaced by climate change and extreme weather events. It is worth noting that a small number of geophysical hazards, particularly earthquakes, also contributed to natural disasters and subsequent displacements” (Asia Pacific National Societies in Action, 2020).

In the social sphere, proximity facilitates movement and enables stronger local cultural influences. Regional identities often play a significant role in shaping individuals' sense of self. For example, “a person may identify as Hindu, Indian, or South Asian, or as European, British, and Scottish. However, it is more challenging for the same person to simultaneously identify as Swedish, Australian, and Muslim, or as Russian, Latin American, and Buddhist” (Ole Waever, 2008).[3]

The impact of climate change is expected to exacerbate existing disputes between neighboring states. The Eastern Mediterranean region has already experienced the effects of climate change, including severe and prolonged droughts. For instance, “the recent drought in the region has been identified as the most severe in the past 900 years” (Cook et al., 2016).

Some studies suggest that “the decline in rainfall levels has significantly reduced agricultural productivity in the Euphrates and Tigris basins, leading to the displacement of hundreds of thousands of people in Syria” (IPCC, 2018).

Border disputes among states often arise in relation to the definition and recognition of transboundary and international waters. For instance, the Euphrates and Tigris rivers, which originate in Turkey and flow through neighboring countries, have differing interpretations regarding their classification. While Syria and Iraq consider them as international waters, Turkey views them as cross-border waters. The majority of the river's flow originates from Turkey.

The notion of a ‘national river’ refers to rivers that flow entirely within the borders of a single state. The concept of "national jurisdiction" pertains to the management and utilization of water resources within state borders. As such, “a country has the sovereign right to act in accordance with international law regarding its national rivers” (Salturk, 2006).

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[3] As mentioned, when a state faces circumstances such as drought, famine, rising sea levels, and more, it may choose to relocate or migrate to a neighboring state as a common behavioral tendency. If this situation escalates into mass migration, similar to the situation during times of war, it is evaluated within the national security framework of the receiving state. Just like in the case of war, one state may not engage in direct conflict with another state solely based on the fact that it shares a border with them (this is a matter of preference and foreign policy).

However, given that the consequences of the climate crisis have already resulted in similar outcomes in geographically related regions, it is likely that one or more states, when faced with an extraordinary impact of the crisis, will be more susceptible to border disputes and even conflicts or occupations.

In this context, natural resources become a crucial aspect of national security and foreign policy. Apart from existing challenges, conflicts over resource sharing are expected to intensify due to rising sea levels and the decline in water resources caused by drought.

Another example that highlights the impact of climate change on unresolved insular and border issues is the case of Turkey and Greece. These issues are assessed within the framework of the potential rise in sea levels in the future. According to the 'Intergovernmental Panel on Climate Change's Fifth Assessment Report (Aurescu & Oral, et al., 2020), "sea level rise is projected to accelerate'. 'If the current approach to the problem continues, low-lying coastal regions and islands will permanently remain underwater" (IPCC,2019)'. This climate trend is confirmed by the recent Intergovernmental Panel on Climate Change Special Report on Oceans and Cryosphere in a Changing Climate.

The 1995 Kardak Crisis highlighted the significance of the disputes between Turkey and Greece regarding the Aegean islands and maritime borders. The Kardak Crisis involved discussions over control of small rock formations. The maritime boundaries between the two countries were initially set at 3 miles and later extended to 6 miles at different times by each nation.

As a consequence of the climate crisis, certain rocks under Greek jurisdiction are at risk of being submerged due to rising waves or underwater erosion. "The rise in sea level will undoubtedly impact key geographical points and coastlines in both states" (Bayıllıoglu, 2022). Referring to the unresolved island dispute in the context of the Kardak Crisis, it poses a potential security threat that could escalate in other ways. Moreover, the crises could deepen for the two countries that do not agree on continental shelf boundaries[4]. The continent holds great importance for states in terms

[4] According to Article 1 of the Convention on the Continental Shelf, which was signed in Geneva on 29 April 1958, "the continental shelf is defined as the seabed and land beyond a country's coast, extending to a depth of 200 meters or to the extent that the depth of its waters allows for the exploration and exploitation of natural resources" (Arı, 1992).

However, since Turkey has not signed the Convention on the Continental Shelf, the issue between the two countries cannot be resolved through binding agreements based on this convention. Consequently, any decision taken by Turkey that could potentially pose a threat to national security would require security assessments for areas where ongoing climate-related issues may escalate.

of minerals and natural wealth. Risks of coastal submergence due to climate change and the loss of biodiversity further contribute to security concerns in this regard.

"The anticipated rise in sea levels represents a significant risk factor for the coming century or even earlier. It will affect the vast majority of low-lying coasts worldwide, regardless of whether they are located in the global north or south, urban or rural areas, or continental or island regions"(IPCC,2018). The risk will not only be influenced by rising sea levels[5] but also by other climate and ocean-related changes, including extreme events, urbanization of natural coastal systems, population growth, and changes in lifestyle.

According to the IPCC's Fifth Assessment Report or AR5 (IPCC, 2013b), "the average global surface temperature increased by 0.85°C between 1880 and 2012, and the primary cause of warming observed since the mid-20th century has been the human impact on the climate. According to the temperature data set used, 20–40% of the world's population has already experienced a regional warming of more than 1.5°C for at least one season, and many regions of the globe are currently experiencing greater regional heating".

"The temperature rise to date has led to profound changes in human and natural systems, including drought, flooding and some other extreme weather conditions; changes such as sea level rise and loss of biodiversity pose unprecedented risks to vulnerable individuals and populations" (IPCC, 2012a).

The argument that the 21st century will be the "century of water wars" (Rahaman, 2012) shows the point where the political dimension of water has come. "According to United Nations (UN) 2018 data, approximately 700 million people in 43 countries still experience serious difficulties in accessing clean water. by 2025, this figure is

[5] "The average sea level in the Mediterranean has increased by 6 cm in the past 20 years. According to a 2013 IPCC report" (Medocc, 2020), "the global average sea level rise is projected to be between 26 and 98 centimeters by 2100" (IPCC, 2013). "These findings indicate that the average sea level in the Mediterranean basin is expected to rise from 44 cm to 102 cm by the end of the 21st century" (Allevi, 2016).

These research findings and forecasts, spanning over three years, highlight the challenges in accurately predicting the short-term and long-term effects of climate change. "The Mediterranean basin has undergone changes in its land and usage patterns over thousands of years, but the pace of change has accelerated significantly since the second half of the 20th century" (MedECC, 2020).

estimated to reach 1.8 billion people. In addition to the extent of its impact on human health, 90% of natural disasters are caused by water" (TASAM, 2022).

The Nile River, which is described as Egypt's vital vein with the continuing population growth, is therefore another important example. With 6853 kilometers in length, the Nile river is one of the longest rivers in the world. The Nile is the only river that flows from the south to the north in the 11 African countries.

"Although the Blue Nile from Ethiopia provides 80% of the river water, the amount of rainfall in this region is very important for preserving the water level of the Nile. The Nile Basin[6] is currently home to more than 400 million people, and this number is growing every day" (INSAMER, 2018).

The expected impacts of climate change across various sectors are predicted to result in increased fractures, transformations, and growing threats in both the short and long term, leading to an insecure environment. International organizations and reports highlight the importance of adopting and enforcing additional international legal instruments to ensure the conservation and sustainable use of ocean and marine biodiversity, as evidenced by the themes related to border disputes.

[6] "The Nile River holds crucial importance as a water supply and agricultural irrigation source for all countries in the region, with Egypt being the most reliant on it. However, a dispute emerged when Ethiopia began constructing the Grand Ethiopian Renaissance Dam (GERD) on the Blue Nile, one of the Nile River's two main tributaries. The dam, expected to be Africa's largest and the world's third-largest hydroelectric power plant, raised concerns in Egypt due to its potential impact on the flow of the Nile waters. Approximately 85% of the Nile's water originates from the mountains of Ethiopia, and the construction of the dam grants Ethiopia control over the river's flow" (Yılmaz, 2020).

"Similar concerns have arisen in the past with other major dams along the Nile, such as the Merowe Dam in Sudan completed in 2009 and the Aswan Dam in Egypt constructed in the 1960s. The growing population in the Nile Basin and the subsequent increase in demand for water, food, and electricity have elevated the significance of the Nile River. Basin countries have turned to large-scale projects that significantly alter the river's ecology. Besides environmental considerations, Ethiopia's aspirations to harness the Nile's resources have led to a political conflict with Egypt. The project will provide hydroelectric power to Ethiopia but poses risks such as potentially impeding the natural movement of sediment along Egypt and the Nile, which could reduce water flow to the Nile Delta and deprive it of essential minerals for productive agriculture" (Tandogan & Yucel, 2017).

"Each of the mentioned issues gains even more significance considering Egypt's projected population growth. Current estimates indicate that Egypt's population is expected to double by 2078. This population growth will further strain already depleted resources, leading to increased demand for food and water. Urbanization and pollution are also likely to intensify in the Nile Delta area as a result of the expanding population. These interconnected environmental challenges are bound to manifest as external issues within shared borders" (Tandogan & Yucel, 2017).

By analyzing the aspects emphasized in climate crisis research, it becomes evident that the understanding of border security is broadened.

4.2 Migration and Displacement : Social and Humanitarian Consequences

Migration is defined as 'the transition of a person or group of people across an international border or within a country'. "It is "the movements of the population where people change places, regardless of their duration, structure, and cause. This includes migration of refugees, displaced persons, economic immigrants, and persons working for different purposes, such as family reunification" (Perruchoud & Redpath, 2017).

When the issue of climate has been historically studied, it has also caused migrations many times in the past.[7] When considering an emphasizing move to change the location that expresses the borders of states, the issue of migration is part of the discipline of international relations. The emphasis on the relationship of the migration phenomenon with borders also highlights the issue of security.

The concepts associated with migration and migrants are shaped by the constantly changing dynamism of the post-Cold War globalized world. "When we examine the reflections of climate change to the present day, we find that changes in migration patterns are accelerating even more" (IPCC,2021) The risks associated with climate change are affecting the land and resources on which the human population depends, threatening more and more of the planet.

The World Bank report provides a global forecast that climate migrants in the six regions (South Asia, Latin America and Sub-Saharan Africa, East Asia and the Pacific, North Africa, and Eastern Europe and Central Asia) will be up to 216 million by 2050.

[7] "The Turks have a history of migration movements from Central Asia to various directions such as the west, north, east, and south. One significant migration occurred during the 4th century AD when they faced challenges and defeat against China. This period was marked by severe drought and China's political and military pressures. The migrating Turks, who relied on pastoral and livestock farming, faced difficulties in finding sufficient resources for their animals. Additionally, population growth, deteriorating living conditions, and conflicts within Turkish communities further contributed to the migration. Consequently, the migration from the north of the Black Sea to Europe began during this time, initiating the Migration of Tribes, one of the largest migration movements in world history, which had multiple climate-related causes" (Czegled, 2016).

According to the report, “If countries now begin to reduce greenhouse gas emissions, close development gaps, repair vital ecosystems and help people adapt to the climate, domestic climate migration could be reduced by 80% to 44 million people by 2050” (World Bank Group, 2019).

According to experts, the number of people who will be forced to migrate due to climate is exceeding that of people displaced due to occupation: “The total number of international migrants in the middle of 2020 is 280.6 million” (IOM, 2020).

The problems and failure to take measures caused by persons who have been forced to migrate due to occupation, as accepted by international law, indicate that similar problems[8] may be encountered in the future. Migration affects countries economically, socially, and politically in many ways. The importance of immigration policies in the fight against these problems is huge. Today and in the future, the decline in living resources, the rise of environmental disasters, or war situations in the direction of the climate crisis will undoubtedly trigger migration, and similar conflicts are expected.[9] “It is estimated that nine out of 10 natural disasters are associated with climate change” (Ziya, 2012).

[8] To explain with an example, the member states that became the European Union by developing the basis of economic formation after the Cold War were affected by globalization. Countries have made various policies to take measures against mass migration. “With irregular migration, Turkey's geographical location has been utilized. Turkey, which is located at the intersection of Europe, Asia, and Africa due to its geopolitical position, has been seen as an important tool by refugees to reach Europe, used as a transit region and has become a country that is not only receiving or sending migration but also both receiving and sending migration” (Ozturk & Boyacı, 2022).

In 2011, the attitude towards those who had to migrate due to the war in Syria is important. “The first mass population movement from Syria to Turkey was on 29.04.2011 with a group of 252 people through the Cilvegözü border gate in the Yayladağı district of Hatay province, followed by an uninterrupted flow of refugees, albeit decreasing after 2016. As of June 2019, Turkey alone hosts more than 54% of the 6.5 million Syrians who have left their country. As of June 2019, there are 4.1 million registered refugees in Turkey, of which 3.6 million are Syrians. It should be added that if Syrians who came to Turkey and then left for other countries are added, the number of Syrians entering Turkey can be said to be close to 5 million” (Erdogan & Corabatır, 2019).

In return for this support, Turkey received financial aid from the European Union. The Syrian crisis, on the one hand, necessitated agreements between the European Union and Turkey, and on the other hand, it offered both sides proposals in line with their own interests. In this process, promises were broken and postponed, causing the relationship between the parties to fray. This example is both recent and demonstrates the necessity of determining the migration policies of a developed international actor and a developing country with the right analysis in terms of security. We can interpret it as both sides failed to manage the process correctly.

[9] By citing the UK's departure from the European Union due to the migration problem as an additional example, we see that countries have different ways of reacting to problems when it comes to their own interests. In this case, another security dimension of climate change is that the problem of climate refugees could become unpredictable in the future and pose a real threat to national security.

The driving forces of climate change migration are gradual changes in the environment, such as extreme weather events like tropical hurricanes and droughts, or soil salting and rising sea levels. These changes have “long-term consequences on the economic condition, health, and safety of people living in the affected areas and therefore pose a threat to human rights such as the right to adequate food, health, and shelter. Violent conflicts can also be aggravated by the effects of climate change” (BMZ, 2022).

Climate refugees who have been forced to leave their habitats due to effects such as rising sea levels, degradation of agricultural land, and natural disasters have become one of the topics discussed in the discipline of international relations in recent years. “Climate refugees, who are not covered by the Convention Relating to the Status of Refugees and are directly associated with environmental refugees, are not only related to the environment but also to the security issue” (ASSAM, 2019).

“Changes in the natural environment and environmental destruction change living conditions, forcing individuals to migrate. The depletion of natural resources in a region, seasonal changes, decrease in agricultural productivity push people to migrate and find more livable places” (Williams, 2008). The multidimensional aspects and effects of climate change, especially in terms of migration, will become more important in the context of security in the future.

“Experts expect the effects of a warming world and more frequent extreme weather events to exacerbate already existing vulnerabilities, particularly in the global South, in the areas of food security, health issues and freshwater supply” (IOM, 2014).

As an example, “Mexico is susceptible to these encounters. People are already leaving the state of Oaxaca due to drought and soil erosion. According to researchers, future global warming could lead to a 40% reduction in the amount of rain-fed maize produced in Mexico. Since Mexico has a competitive advantage in water-intensive fruits and vegetables, this transformation could cause major internal tensions through long-term land degradation, free trade and privatization of communal peasant lands” (Liverman, 1991).

In traditional security, resource depletion, population growth, resource distribution and the resulting internal conflicts were only part of the political agenda. However, an

example of a securitization process is an attempt at legitimization. The Kribati Case, an important case on the legal definition of climate refugees, can be examined.

The first official step in the evolution of the status debate on migration from theory to practice was the Kiribati Case and the Ione Tetiota decision. It is a lawsuit filed by an individual who migrated to New Zealand as a result of environmental factors in Kiribati, claiming that returning to his/her country would negatively affect his/her living conditions and health in the future.[10]

The Ione Tetiota Judgment in the Kiribati Case, regarding the claim of a person seeking asylum due to the impacts of climate change, was based on Article 6 of the International Covenant on Civil and Political Rights (ICCPR), which affirms that "Every human being has the inherent right to life. This right shall be protected by law" (ICCPR, 1976).

"In the first decision concerning an individual's complaint of denial of asylum due to climate change effects, the UN Human Rights Committee emphasized that states are prohibited from deporting individuals who face conditions resulting from climate change or environmental degradation that violate the right to life" (Safi, 2020).

The statement in paragraph 62 of the Committee's resolutions on climate change that "Environmental degradation, climate change and unsustainable development constitute some of the most urgent and serious threats to present and future capabilities" (CCPR, 2018) highlights the alarming nature of the issue.[11]

According to the Rio Declaration (1992), "the implementation of the right to life, including the obligation to ensure life with dignity, relies on the actions taken by States Parties to protect the environment from pests, pollution, and climate change. It emphasizes that states should promote sustainable use of natural resources, establish and enforce environmental standards, conduct environmental impact assessments,

[10] As a result of the investigations, it was concluded that there was no arbitrary threat and that the realization of the allegations was only probable and hypothetical, citing the consideration of measures related to Climate Change in the 2007 National Adaptation Action Program of the Kiribati government. "The Committee found that there was no direct threat to the applicant's life and therefore the applicant's claim of non-refoulement was untenable" (UN, 2020). The United Nations Human Rights Committee analyzed the reality of the allegations and rejected them. However, this case has led to the conclusion that new regulations are required under international law for future migration problems.

[11] On the basis that the consequences of climate change correspond to sudden onset or slow onset processes, it was stated that asylum seekers do not need to certify that they would face imminent danger if returned to their country. The need for a new definition and accelerating the implementation of decisions is evident in this example.

engage in consultations with relevant states on activities with significant environmental impact, cooperate with other states in addressing natural disasters and emergencies, provide access to information on environmental hazards, and apply a precautionary approach".

Therefore, international legal arrangements and migration policies are being developed to address climate migration and protect climate migrants within the framework of national security, aiming to prevent harm to both states and individuals resulting from the security challenges posed by climate change.

4.3 Energy Sources and Competition : Implications for Regional and Global Dynamics

In the post-Cold War era, energy resources have emerged as one of the most crucial issues in international relations due to the interdependence resulting from the multipolar world order. The secure supply of energy has become a significant challenge after the power struggle between the US and the USSR, as energy has taken a central position on the global agenda with advancing technologies.

"The economic dimension of energy resources is undoubtedly important, but what holds even greater significance is the fact that states utilize energy as a tool of policy, using it as a means of cooperation or leverage in certain periods of interdependence" (Demiryol, 2016). This has caused instability in the past and will continue to do so in the future. Furthermore, given that the majority of the world's hydrocarbon reserves are located in regions vulnerable to the effects of climate change and that oil and gas-producing governments have distinct social, economic, and demographic characteristics, increased instability becomes inevitable.

In the securitization of the climate crisis, energy resources have received significant attention and efforts, which have yielded successful securitization moves. The invasion of Ukraine by Russia in 2022 serves as an example of the vulnerability of global energy markets and the security risks posed by the climate crisis on energy resources and the need for adaptation. Anticipating the tensions that energy supply would create, the European Union has been working to transform energy habits within the scope of climate adaptation efforts.

The European Commission's REPowerEU plan[12], announced in May 2022, provides a comprehensive framework at the EU level."It entails policy decisions by member states to reduce energy demand, enhance energy efficiency, and adopt renewable energy sources individually or collectively to mitigate energy disruptions from Russia and ensure energy security within the EU"(European Commission, 2022).

As part of this process, the EU managed to significantly reduce gas usage within a short period, aided by a mild winter and a decrease in industrial demand due to high gas costs. According to Eurostat (Myllyvirta, 2023), "EU gas usage dropped by nearly 20% between August and November 2022 compared to the same months in 2021, with 18 member states surpassing the target of 15% reduction. If member states continue implementing such measures over time, it is projected to lead to longer-lasting energy savings and further reduction in gas consumption".

According to the International Renewable Energy Agency (IRENA) report from 2022, "the clean energy transition is seen as the most reliable long-term solution to enhance security of energy supply" (IRENA, 2022). The European Union's response to this transition is built upon an existing policy framework that predates the conflict in Ukraine, with a strong foundation in climate goals and the European Green Deal.

Efforts are being made to bring together all stakeholders involved in the energy transition to ensure smooth management and integration into future climate actions. The focus is on understanding how climate change will impact energy demand in key sectors such as buildings, industries, and transportation.

[12] Russia has been a significant supplier of natural gas, oil, and coal to the European Union (EU) in recent years, holding a dominant position in the energy market. Many EU member states have a historical dependence on fossil fuel supplies from Russia, which controls a significant portion of the oil and gas pipeline infrastructure serving EU markets. However, Russia's invasion has had a profound impact on energy prices, causing them to surge not only in Europe but also globally.

In response to the energy crisis caused by the invasion, the European Commission introduced the REPowerEU Plan. "This plan emphasizes the need for immediate and decisive action to provide affordable, secure, and clean energy to companies and households. It calls for measures such as lowering energy prices and ensuring the storage of gas for the upcoming winter. The plan aligns with the European Green Deal, emphasizing the urgency and clarity of transitioning to clean energy. It aims to reduce Europe's dangerous over-reliance on fossil fuels from Russia well before 2030" (European Commission, 2022).

By taking proactive steps to diversify energy sources and accelerate the transition to cleaner alternatives, the EU aims to enhance its energy security and reduce its vulnerability to disruptions caused by geopolitical events. Ending the dependence on fossil fuels from Russia is seen as a crucial aspect of this strategy.

Given the increasing energy demand, it is crucial to address how both energy-producing and consuming countries can meet this demand while managing climate change risks, thereby ensuring energy security.[13]

Governments are developing plans to boost the supply and deployment of new and renewable energy sources within their regions. These plans support not only national governments but also local governments in their energy transformations. Today, various multifaceted solutions are being developed to address security concerns arising from the rapid increase in energy production.

It is important for states, key economic actors, and local communities to align with the scientific agenda in order to achieve environmental security. While the issue of climate change is global, its political significance is often determined at the local level. "Successful securitization efforts often occur at the local level, where local disasters and sustainability thresholds play a significant role" (Buzan, Wæver, & Wilde, 1998).

In countries like Vietnam, institutions like the National Steering Committee on Green Growth have emerged to formalize securitization efforts and work towards achieving carbon zero targets, showcasing the growing importance of climate security in national-level decision-making processes.[14]

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[13] Indeed, energy diversification is crucial for the European Union to ensure its energy security and meet its climate commitments. Relying solely on coal would not align with the EU's climate goals, and it is important to move away from fossil fuel-based energy sources. Diversifying the energy mix with renewable sources is essential for climate crisis security.

While renewable energy sources like hydropower can contribute significantly to the clean energy transition, it is also important to avoid over-reliance on a single source. If Europe had relied solely on hydropower and faced a drought-induced reduction in hydropower generation, it could have impacted the achievement of its renewable energy goals.

To mitigate such risks and ensure energy security, it is essential to diversify the mix of renewable energy sources, including wind, solar, biomass, and geothermal. By doing so, the European Union can reduce its vulnerability to climate-related impacts on specific energy sources and maintain a more resilient and sustainable energy system.

Energy diversification, along with investment in energy storage technologies, grid infrastructure, and interconnections, can help ensure a stable and reliable supply of renewable energy, even in challenging situations such as extreme weather events or geopolitical conflicts.

[14] "The Committee is a disciplinary body responsible for assisting the Government and the Prime Minister in addressing issues and proposing directions and measures for green growth. In its founding strategy, its objective is to contribute to accelerating the process of restructuring the economy through growth model transformation to ensure economic prosperity, environmental sustainability, and social equity. It also aims to facilitate the transition to a green and carbon-neutral economy and contribute to the reduction of global warming" (Ministry of Industry and Trade, 2023).

The energy sector is the source of nearly three quarters of greenhouse gas emissions. It holds the key to averting the worst impacts of climate change, perhaps the greatest challenge facing humanity today. “Net zero by 2050 is consistent with efforts to reduce global carbon dioxide (CO2) emissions and limit the long-term increase in global average temperatures to 1.5°C” (IEA, 2021).

The number of countries committed to achieving net zero emissions is increasing. “International organizations and states prove the existence of all the necessary technology with the policies they have committed to reduce global emissions” (Sengoz, 2021). “Studies on energy efficiency include both savings in the field of consumption and preventive approaches on the supply side” (Kavak, 2005).

“The number of carbon pricing mechanisms implemented around the world has more than doubled, especially in the last decade” (Navigant & The Generation Foundation, 2018). At the same time, there is consensus among both public and private actors on the importance of carbon pricing in the transition to a low-carbon economy. Governments that have made carbon zero commitments are leading the way in promoting infrastructure planning to expand the availability of energy resources in line with carbon zero emission targets.

“Adoption of low-emission technologies is lagging in many developing countries, especially in least developed countries, in part due to limited financing, technology development, transfer and capacity. The size of climate finance flows has increased over the past decade and financing channels have expanded” (IPCC,2023). “Zero-carbon sources accounted for more than 80% of investment in electricity generation in 2021” (Lancet Countdown,2022).

The IEA published the report[15] 'Climate Resilience for Energy Security' at COP27 to provide a comprehensive overview of climate change risks and impacts on the

[15] The report emphasizes the need for collaboration among governments, international organizations, academia, finance, and the private sector to enhance climate resilience in the energy sector. It highlights that achieving the 2050 net-zero targets requires the adoption of clean technologies by 2030. “The efforts to reduce emissions from the energy sector go beyond CO2, as there is also a focus on reducing methane emissions from fossil fuel supply. It is projected that targeted reductions in methane emissions can lead to a 75% decrease over the next decade through a global and concerted effort” (IEA, 2021).

“Additionally, the report mentions that clean energy production reached its peak in 2020, indicating progress in the transition towards cleaner and renewable energy sources” (Lancet Countdown, 2022). These findings underscore the importance of timely and decisive action to mitigate climate change and promote sustainable energy practices.

energy sector and to implement effective measures for energy suppliers, consumers, and authorities.

Increased rainfall and associated wildfires and floods will have critical impacts on energy systems, leading to global and large-scale disruptions. The International Energy Agency's statements at COP27, along with the Climate Resilience Report, “indicate that rising sea levels will pose a threat to the safe production of fuels and minerals. Experts warn that unless safety measures are increased, temperatures could exceed 4°C” (IPCC, 2022).

Climate change poses risks to global energy security and undermines the availability of reliable resources. It affects various aspects of the supply and demand patterns in the energy sector, including the extraction, processing, and transportation of fuels and minerals, as well as the efficiency and reliability of energy production. Without an accelerated transformation of energy infrastructure, climate change disruptions will escalate in the coming decades. Ongoing efforts are focused on developing a comprehensive understanding of the impacts of climate change on energy supply.

4.4 Resource Distribution and Environmental Inequities

In recent times, the cost of living has been on the rise due to a combination of factors such as increasing epidemics, economic fluctuations, and the challenges posed by the climate crisis. Climate change and ecological issues are increasingly jeopardizing our food supply, access to water in certain regions, and exposing us to natural disasters. It is clear that significant transformations are needed in agricultural practices, water resource management, energy infrastructure, and our consumption patterns to adapt to the fundamental changes happening in the world.

“The impacts of climate change directly affect our right to life and well-being. These challenges make it increasingly difficult to meet basic needs such as shelter, food, and clean water, ultimately hindering our ability to live in safe, healthy, and sustainable environments” (Topgul & Beytas, 2022). To address these issues, it is crucial to prioritize the problems faced by individuals affected by climate conditions and environmental injustices within the framework of human rights and social justice, as part of our broader security concerns. The World Bank warns that “the proportion

of extreme poverty in countries with fragile economies is projected to reach 85 percent by 2030, affecting approximately 342 million people" (World Bank, 2011). Furthermore, rapid population growth will further exacerbate the global problem of poverty. In this context, the term "other resources" refers to the minimum assets and resources that societies should have access to.

Amartya Sen[16], a prominent economist, has "significantly contributed to shifting the focus of economic analysis from an exclusive emphasis on income, growth, and utility, towards variables that prioritize human rights and well-being" (Vizard, 2005). He has "emphasized the importance of protecting human resources and rights for development, a perspective often overlooked by classical economists" (Hausman, 2007).

According to the World Bank's definition, "poverty entails the deprivation of basic freedoms necessary to meet vital needs such as food, shelter, education, and health" (World Bank, 2000). This definition underscores how individuals living in poverty are particularly vulnerable to diseases, economic disruptions, and the impacts of natural disasters.

Depending on Buzan, Wæver, and de Wilde (1998), "in the broader understanding of environmental security, food-related issues encompass various challenges such as poverty, famines, overconsumption, and the associated health problems". This

[16] Amartya Sen, a key figure in the development of the Human Development Index, poses a fundamental question about the essence of human development accounting. He asks, "What does human development accounting actually do?" and inquires about its unique characteristics and defining attributes.

According to Sen, human development accounting goes beyond focusing solely on traditional economic indicators, such as gross national product per capita. Instead, it involves a comprehensive examination of various aspects of people's lives in a society, including education, healthcare, and other variables. This approach acknowledges the rich and diverse nature of human experiences and brings a pluralistic understanding of progress to the forefront.

Sen emphasizes that human lives are impacted by a wide range of deprivations and challenges, and any comprehensive framework for development assessment must recognize and address these varied forms of deprivation. "While the framework should be credible and coherent, it should also be flexible enough to accommodate different dimensions of deprivation within an overarching framework. Attempting to reduce the complexity of human development to a single measure of success or failure would ignore the inherent pluralities and complexities involved in understanding and addressing various deprivations" (Sen, 2000).

Sen advocates for an inclusive and multidimensional approach to human development accounting that takes into account the diverse aspects of people's lives and avoids relying solely on narrow economic measures. By recognizing the complexities of human experiences and deprivations, a more comprehensive understanding of progress and development can be achieved.

perspective highlights the loss of productive land and water resources, epidemics, poor sanitation, unequal distribution of resources, and the impact of famines.

"The United Nations Development Program (UNDP) offers a different perspective on poverty by introducing the concept of 'human poverty'[17]" (SPO, 2001). The UNDP argues that poverty should not be solely linked to income levels but should be considered as a human category. This means that poverty should be understood as the lack of economic, social, and cultural opportunities necessary for a dignified human life.

"To measure human poverty, the UNDP has developed a human poverty index that takes into account factors such as access to healthcare, clean water, education, the opportunity to live a long life, and the presence of necessary infrastructure to utilize new opportunities" (Demirturk et al., 2011). Sustainability is a key criterion in this measurement.

In the context of the evolving global order after the Cold War, security concerns extend beyond traditional notions of security. Issues like civil wars and terrorist incidents have become significant security challenges. In this regard, securitization enables societies to adopt a multidimensional approach and take preventive measures, particularly in critical periods marked by resource conflicts.

The combination of climate change and the prevailing production-consumption economic model poses significant challenges to agricultural productivity, access to fresh water, and increases the occurrence of droughts and rising temperatures, which in turn lead to social repercussions. It is crucial to analyze and address the systematic

[17] According to Harold W. Watts (1968), "poverty should be understood as a characteristic of an individual's situation rather than a reflection of their personal traits or behavior. This perspective defines poverty as a state in which an individual's consumption options are severely limited, while welfare is described as a condition in which there are fewer restrictions on the range of consumption choices available. In essence, welfare is equated with having control over tangible goods and services, or in other words, control over resources. The less control an individual has over resources, the lower their level of welfare, indicating a greater degree of poverty. Poverty, therefore, is characterized as a situation where the level of control over resources falls below a certain threshold, known as the poverty line" (Goedhart, Halberstadt, Kapteyn, & van Praag, 1977).

"In simpler terms, this perspective suggests that poverty is not solely determined by personal attributes or behavior but is instead rooted in the degree of control individuals have over the resources necessary to meet their needs. When an individual's control over resources is insufficient, their welfare is diminished, and they are considered to be living in poverty. By defining poverty in terms of control over resources, this framework provides a clearer understanding of the relationship between welfare, consumption options, and the constraints that individuals face in their daily lives" (Goedhart et al., 1977).

biases in this context. Apart from the stark imbalances between poverty and prosperity across different parts of the world, it is important to acknowledge that the adverse impacts of climate change will be disproportionately felt in impoverished regions. This realization has spurred efforts to establish investment funds specifically targeted at these regions, which often lack sufficient agency to make decisions for their own survival.

The demand side of the food production chain is heavily influenced by dietary preferences and habits. Achieving a balance in supply would significantly mitigate the rise in greenhouse gas emissions. Surprisingly, even though global food production currently exceeds demand, a staggering number of people remain undernourished or suffer from nutrient deficiencies. According to the IPCC (2019), "between 800 million and 900 million people have experienced undernourishment, and over 2 billion people have faced nutrient deficiencies in different years since 2000".

"The impact of extreme heat waves in 2020 was striking, leading to an additional 98 million people experiencing food insecurity compared to the average annual figures from 1981-2010, as reported by researchers from The Lancet in 2022. Furthermore, the area of global land affected by extreme drought for at least one month per year increased by an average of 29% between 2012-21 compared to 1951-1960" (Lancet Countdown, 2022). These alarming statistics highlight the urgency of addressing climate change and its profound consequences on food security.

"Evidence from observed data and numerous studies supports the assertion that a warming climate has detrimental effects on crop production, leading to reduced yields of staple cereals like wheat, rice, and maize, with variations across regions and latitudes. While higher levels of CO2 can initially benefit crop yields by increasing photosynthesis rates, the magnitude of this effect and its interactions with other factors remain uncertain" (IPCC, 2014).

"The climate crisis has not only resulted in a decline in cereal and pulse productivity, but it has also led to more frequent extreme weather events during crop growth, causing field destruction and crop failures" (Akyuz, 2014). This highlights the vulnerability of agricultural systems to climate change.

"Fisheries play a crucial role in food security, particularly for the 90% of people employed in small-scale fisheries, predominantly in economically disadvantaged

countries" (Cochrane et al., 2011). "However, climate change-induced temperature increases are causing a decline in fish populations, posing a security threat to countries heavily reliant on fisheries" (FAO, 2018).

Investing in disaster risk reduction and adaptation measures, such as fuel efficiency and greenhouse gas reduction strategies in fisheries[18] management, can contribute to climate resilience and mitigate the impacts on the sector.

Climate change, through gradual warming, ocean acidification, and changes in extreme events, will have significant consequences for fisheries and aquaculture. Climate-related disasters are major drivers of food insecurity in both the immediate aftermath and the long term. Droughts, floods, and tropical storms contribute to food insecurity by devastating livelihoods. The relationship between climate change and food production depends on timely and effective adaptation measures. It is important to note that other elements of the food chain, from production to consumption, are also sensitive to climate change, although our understanding of these impacts is still limited.

Numerous gradually changing factors, such as water temperature, pH, and salinity, as well as catastrophic weather events like hurricanes and torrential rain, can impact food safety. The need for new food safety risk assessments that consider specific and emerging food safety concerns is driven by climate change. These assessments will influence risk management, including policy making and decision-making.

According to the Food and Agriculture Organization (FAO, 2018), "Improved early warning systems are essential to reduce the risk to food security caused by climate change-related natural disasters and emergencies. This necessitates effective

[18] "Fishing's contribution to national gross domestic product (GDP) and per capita seafood consumption varies among countries bordering the North Atlantic. In some countries, fishing may have a limited impact on GDP and seafood consumption, and food security may not be the primary concern. However, in Greenland, Iceland, and the Faroe Islands, fishing remains a significant and nationally important activity" (FAO, 2018).

"Throughout the North Atlantic region, there are specific communities, towns, or regions that heavily rely on fishing for employment and income security. Indigenous peoples of the Atlantic Arctic, such as the Eskimos in Canada, the Kalaallit in Greenland, the Saami in Norway, and indigenous communities in the Russian Federation, have a strong dependence on fishing for sustaining their cultural heritage and ensuring food security. These communities are particularly vulnerable to the impacts of climate change on fisheries" (FAO, 2018).

The unique cultural and economic significance of fishing in these regions underscores the importance of addressing climate change impacts on fisheries in order to support the livelihoods, cultural heritage, and food security of these communities.

cooperation and communication between sectors, including aquatic animal health, marine environment, food security, and public health, at both national and international levels". Climate change will directly affect the health of aquatic animals through intensified production, changes in species and genetic diversity, and the spread of native species beyond their geographical distribution areas.

Apart from implementing structural changes, it is crucial for farmers, policy makers, and other stakeholders to engage in transformative, planned, and proactive practices. According to Rickards and Howden (2012), "these practices encompass alterations in land allocation and farming systems, the cultivation of functionally different crop varieties, new land management techniques, and the incorporation of ecosystem services".

Environmental risks and crisis situations, such as high temperatures, droughts, and floods, are expected to gain increasing significance in terms of resource availability in the future. Therefore, societies, communities, and governments must prepare accordingly and take measures to address all risk factors, ensuring a socially and ecologically resilient future that is fair and equitable. Urgent action is emphasized in international reports, policy recommendations, and agreements on this issue.

4.5 Social Pressures and Human Crises in the Face of Climate Instabilities

Climate change has been described as the greatest global health threat of the 21st century. Its devastating impacts, which threaten to reverse many of the significant health and development gains made over the last 50 years, have had and will continue to have significant negative impacts on the health and well-being of billions of people. Does the sociological and cultural structure of societies affect the green transformation? This is one of the most important questions to be asked when making risk calculations of climate change. Regulations, economic and financial developments in different sociocultural structures affect the relationship between green transformation and society both nationally and globally.

Although climate change does not have a direct impact, understanding the effects of Covid 19 on society is important in terms of understanding the security problems that may be encountered in the future, as it increases the risks of epidemics.

The Covid 19 period[19] can be characterized as a common heritage. Consumer behavior and trends have changed drastically during this pandemic. In the age of rapid consumption, which continues unabated, the habits of consumers have moved to a different dimension. The behavior of individuals, which we can define as sensitivity, has gathered the tendency of wants and needs around the concept of sustainability.

The stagnation of city life has strengthened the bond between nature and human beings. A critical element in reducing vulnerability to climate change is to educate people that they are an integral part of the Earth system and have a major impact on its balance.

> "Climate change has both direct and indirect effects on human health and well-being. The direct impacts are evident through increased mortality and morbidity resulting from extreme weather events like heatwaves, storms, floods, and other disasters. Additionally, climate change influences the transmission patterns of water and vector-borne diseases, respiratory conditions linked to poor air quality and allergen exposure, and nutritional deficiencies and foodborne illnesses due to disruptions in natural systems.
>
> Furthermore, climate change indirectly affects human health through factors such as food shortages, which contribute to a complex burden on health. The impacts of climate change extend beyond physical health and also undermine the social determinants of health, including livelihoods, social inclusion, equity, and access to healthcare and social services. These effects exacerbate existing economic and social inequalities and can lead to conflicts, displacement, disruptions in food supplies, increased risks to mental health, and a rise in gender-based violence (GBV)" (UNDP,2023).

Social welfare, which can be considered within the securitization of Climate Change, emerges as a point to be considered in this topic. "Issues related to keeping the asset base of society intact are directly related to a concept that has attracted much attention recently, namely well-being. This is a multidimensional concept that encompasses not only material well-being but also various dimensions of quality of

[19] However, the global economy is gradually recovering from the lingering impacts of the Covid-19 pandemic, albeit at an uneven pace. The challenges associated with high unemployment and inflation stemming from the crisis create an unfavorable backdrop for the necessary green transformation required to address climate change. Conversely, the urgency prompted by economic pressures and the disruptions experienced during the pandemic can also serve as catalysts for adapting to new realities. To gain acceptance from societies, strategies for achieving a green growth economy must be designed to align with their values and aspirations.

The process of adjusting existing growth patterns and consumer behaviors in line with new technologies and infrastructure entails long-term planning. In an economy where the bounds of growth are seemingly limitless, as witnessed in the advent of Industry 5.0, societies face significant pressures in terms of being exposed to environmental risks while simultaneously needing to acquire the skills demanded by a transforming economy.

life, such as health, education, social relations or security" (OECD,2020). Conceptual and empirical work to better measure quality of life is ongoing in many places, including the OECD. "For green growth, a new dimension of the environment is emerging with its direct impact on people's quality of life" (OECD, 2011).

Individuals will be the most affected by the security problems that climate change risks will create. The consequences of climate change will therefore generate many humanitarian crises. Climate change also threatens the fundamental cultural dimensions of lives and livelihoods. Crises cannot be characterized only in economic and political terms; they also include crises arising from societies search for meaning and values. "Historical consciousness also includes an inventory of the relationships and forms of relations that human beings have established with themselves, with other people and societies, and with nature/the universe" (Gunay, 2011).

For example, "It has been concluded that climate change will affect harvests of marine species of spiritual and aesthetic importance to indigenous cultures" (IPCC, 2014). "Rising sea levels are already transforming the seascape, such as the shape of coasts on many low-lying islands in the Pacific, leading to the alteration or loss of geomorphological features representing deities and mythological ancestors. This changing seascape also affects people's mobility and settlement patterns, and thus the structure and transmission of indigenous knowledge. Sea level rise and fear of climate change contribute to the erosion of indigenous culture and knowledge of the ocean by encouraging security measures and the grouping of local people in the safest places" (IPCC, 2023).

Overall, the availability of and access to culturally important marine species, communities' reliance on the ocean for their livelihoods and cultural beliefs, and rising sea levels altering marine and terrestrial ecosystems all pose threats to the transmission of Indigenous knowledge. The survival of these communities is jeopardized by declining fish populations and the degradation of iconic seascape features that have been their livelihoods for decades.

However, degradation due to climate change, biodiversity and habitat loss, coral reefs, charismatic species (e.g. some marine mammals and seabirds) and geomorphological features (e.g. beaches) are critically important for all cultural groups. "There are also aesthetic and inspirational values of marine biodiversity and

ecosystems that are important for the psychological and spiritual well-being of people, including in film, literature, art and recreation (Pescaroli & Magni, 2015).

A group of experts (Marshall, et al, 2018) "assessed the importance of identity, pride, place, aesthetics, biodiversity, lifestyle, scientific value and well-being in the Great Barrier Reef region by 8,300 people from multiple cultural groups. These groups included indigenous and non-indigenous local residents, Australians (non-local), international and domestic tourists, tourism operators and commercial fishers. They found that all groups gave high ratings to all (listed) cultural values, suggesting that these values are critically associated with iconic ecosystems. The impacts of climate change on the Great Barrier Reef, through increased temperatures, cyclones and sea level rises that cumulatively reduce the quality of the reef, could therefore result in cultural impacts for all groups", they concluded. In this case in particular, many ocean and coastal-dependent communities place high value on marine ecosystems and climate.

There is strong evidence that when people are displaced from places they value, their cultures are diminished and in many cases endangered. For example, "When a resource user, such as a fisherman, farmer or forester, is suddenly faced with the prospect that their resource-based occupation is no longer viable, they lose not only their means of income generation, but also an important part of their job. Loss of identity can also have serious economic, psychological and cultural impacts" (Turner, etc., 2008).

Drought and rising sea levels in particular will directly affect climate-dependent tourism markets worldwide. Tourism is one of the largest sectors in the global economy. Coastal tourism and other sea-related recreational activities contribute significantly to the tourism sector. Tourism is one of the main industries providing opportunities for social and economic development. Marine tourism is particularly important for people living in many developing coastal countries and developing Small Island Developing States. "Droughts, which are predicted to become more frequent, will also affect the tourism industry (and local food security) through water and food shortages. If climate change and ocean acidification reduce the supply of seafood, the attractiveness of coastal areas for tourists will also decline" (IPCC, 2023).

The impact of climate change goes beyond environmental concerns and extends to the fabric of societies, with the potential to cause major humanitarian crises and erase natural wealth and historical heritage from the world map. This distinguishes climate change from other security problems and elevates it to a universal dimension.

Forced migrations, which are triggered by climate change, also contribute to humanitarian crises. “The process of forced migration involves significant losses, including leaving familiar places, separation from friends and family, cultural detachment, and the loss of previous identity and elements that contribute to one's sense of self” (Simsek, 2018). These situations are complex and tragic, comparable to the psychological impact of war or occupation.

As climate change presents multifaceted challenges, it is important to recognize that its impacts are comparable to those of other major societal transformations. The evolution of social dynamics and discourse frames interconnect and influence each other. When one discourse structure changes, it influences the attitudes of other discourse structures. This mutual influence and transformation result in the transformation of historical societal mental codes into new forms and value systems. Society adapts and internalizes dynamic frames of discourse.

In recent years, there has been an increased awareness of human rights among individuals and societies. Globalization and the recurrence of crises within similar communities influence public demands and expectations. The climate change crisis, with its profound impact on all aspects of life and human rights, is manifest in various fields of social sciences. This situation directly affects individuals and amplifies the dimension of humanitarian crises when public trust is undermined due to inadequate measures taken in response to climate change.

The adoption and implementation of sustainable development as a solution to climate change within societies may lead to individuals becoming more conscious and exhibiting more environmentally sensitive behavior compared to states. This shift in individual demands may result in changes in governments, democratic processes, or electoral habits. As individual demands increase, governments may increase their effectiveness in addressing national security concerns.

Addressing climate change requires a comprehensive approach that integrates environmental, social, and human rights considerations. By recognizing the universal

impact of climate change and its connection to societal dynamics, governments and individuals can work together to mitigate its effects, promote sustainable development, and safeguard human rights.

For example, the increasing number of lawsuits related to the risks of climate change in recent years is evidence of declining public trust in governments. In terms of inadequacies in the fight against climate change, one of the most important climate justice cases is Juliana v. United States (2018). In November 2015, a group of young people and "future generations" mobilized to sue the government for inadequacy in combating climate change “due to concerns about the accumulation of greenhouse gases in the atmosphere” (Juliana v. United States, 2018).

“With respect to the plaintiffs ‘public trust’ claim, the district court held, as a matter of ‘substantive due process’, that ‘Plaintiffs have a cause of action under the Constitution to assert claims that the Federal Government breached its fiduciary duties by failing to protect the atmosphere, water, seas, coasts, and wildlife’” (Case 6:15-cv-01517-TC Document 177-1 Filed 06/09/17 Page 49 of 53).

Although the case was dismissed on the grounds that the district courts were not competent to decide the case, increased public awareness will eventually push official institutions to find just solutions. Where public trust is undermined, humanitarian crises bring the welfare issue to the fore, which will fundamentally affect security problems. “The intersection of environmental problems with threats from other sectors is the basis for the very successful securitization by environmental activists” (Buzan, Wæver, & Wilde, 1998).

Narratives about the existential dimension of climate change for societies and humanity as a whole have recently received significant attention, as it is one of the dominant themes articulated by climate movements around the world. People involved in climate movements portray climate change as an existential threat to their future and the future of humanity.

As a result, the importance of the cultural impacts of climate change is part of security, as individuals exist with and are directly affected by culture. Historical consciousness, natural wealth and resources, cultural structure, traditions, and customs can be carried to future generations by maintaining the existence of small habitats. In addition to the uniform society and individual structures brought about by

globalization, states need to take measures at the level of national security against extinction for their national identities.

5. ACCELERING COOPERATION : THE MEDIATING ROLE OF INTERNATIONAL PEACE ORGANIZATION

"Size or scale seems to be a crucial variable that determines what constitutes a successful security reference object" (Buzan, Wæver , & Wilde, 1998). In the fight against climate change, the legitimacy of the missions of international security and military institutions and the feasibility of their action plans are crucial factors. The effects of security institutions should be understood in the process of securitization of climate change.

Analyzing the post-Cold War international arena, the following effects of climate change on international peace and security can be identified:

-Climate change creates incentives for national, regional, and international security and military institutions to reorganize their objectives. It is predicted to cause changes such as the revision of peace and security agreements.

-Climate change may increase the risk of security disruptions by eroding the sustainability of high-value military alliances and undermining their missions, legitimacy, and viability.

-Climate change may create the risk of military mission failures among nations and military organizations due to severe natural disasters and security disruptions.

-Climate change can lead to the breakdown of food, water, and energy security, as well as peace and security agreements and treaties (e.g., water sharing agreements, ceasefires, security agreements, defense pacts, nuclear security agreements, etc.).

-Security disruptions and the risk of shifts in alliances and power balances can create geostrategic innovations, as climate change can lead to changes in the balance of power in international alliances.

In line with these considerations, the activities of international organizations on climate change and their efforts towards problem-solving are analyzed. The United

Nations (UN) and the North Atlantic Treaty Organization (NATO), defined as post-Cold War international security providers, are evaluated.

5.1 Managing the Climate Crisis : Exploring Mediation Activities

In order to analyze conflicts, mediators must first identify how the process varies by geography. According to Buzan, Wæver, and de Wilde (1998), "in regions characterized by weak states (e.g., sub-Saharan Africa), global and subsystem actors play a particularly important role as they fill a gap at the unit level".

Risk management strategies to control climate change should be based on the known objectives of the conflicting parties and the characteristics of the conflict environment. These hazards encompass contested rules on ownership, governance, or access to natural resources such as water, rural or agricultural development, deforestation, and resource use, including fisheries and dams, as well as the occurrence of events like droughts, floods, or loss of livelihoods.

Due to varying levels of development and other political or military considerations, some regions that will be most affected by climate change are already acquainted with these conditions. This awareness can help determine whether problems are caused by public policies or climate change.

Therefore, a key factor for successful mediation is to make a concerted effort to understand the context and key players in the conflict, assemble a team with the necessary skills to gain and maintain the trust of the disputing parties, and assist them in moving the process forward. Mediation teams strive to comprehend how climate change impacts conflicts and how climate action can serve as a pathway towards resolution.

Buzan, Wæver, and de Wilde (1998) state that "A speech act that poses a threat to an object of reference does not in itself constitute securitization. It is only the securitizing move. Successful securitization only occurs when the audience (the target audience) accepts the issue as a security problem".

In some cases, it may be useful to familiarize disputing parties with climate-related issues, for example, by introducing the topic of climate change before the negotiation process. This can make it easier for mediators to encourage the discussion of climate

issues at opportune moments throughout the process. Similarly, having an awareness of environmental issues within the mediation team can help team members identify openings for peace negotiations.

As O'Reilly (2008) explains, “For example, the citizens of a country can be both the object of reference under threat and the target audience to be persuaded by the securitizer. This facilitates the act of securitization because the group that is declared threatened will be easier to convince to take extraordinary measures”.

The perception of conflict risks by experts is crucial for mediated solutions to climate change.

The Climate Security Risk Perception survey, featured in the World Climate and Security Report, presents a contemporary data analysis that provides insights into the perspectives of security experts regarding climate-related risks. According to the survey results conducted by Caitlin Werrell and Francesco Femia, Co-Founders and Research Directors, Senior Advisors and Directors of the Climate and Security Center/Strategic Risks Council and the International Military Council on Climate and Security (IMC, 2020), the following observations can be made:

“The survey aimed to measure the perceptions of 56 international security and military professionals who possess knowledge about climate risks to security. It analyzed their views on the risks climate change poses to global security. The key findings are as follows:

Most respondents (98%) believe that the impacts of climate change on water security will pose a significant or higher risk to global security by 2040. Similarly, 96% of respondents perceive migration and natural disasters as significant risks, while 94% identify food safety as a considerable concern. Conflict within nations is considered a significant risk by 86% of respondents, and conflict between nations is seen as such by 79% of respondents.

Regarding water security, 93% of respondents believe that climate change impacts will pose significant or higher risks to global security by 2030. Furthermore, 91% view these risks as serious or catastrophic by 2040.

In terms of critical civil infrastructure, 88% of respondents anticipate significant or higher risks to global security by 2040, with 77% expressing similar concerns for the year 2030.

Climate change impacts on conflict within nations are deemed significant or higher risks to global security by 80% of respondents for the year 2030, and 66% view these risks as serious or catastrophic by 2040.

Out of the 22 climate security phenomena assessed in the survey, 13 are considered significant or higher risks to global security by 80% of respondents by the year 2040.

According to security and military respondents, all climate security phenomena assessed are expected to increase, with the most significant increases projected between 2020 and 2040.

70% of respondents identified climate change pressures on peace and security agreements as significant or higher risks to global security by 2040.

While perceptions of threats to "security institutions" are relatively lower compared to threats to the broader security environment and infrastructure, 57% of respondents still perceive changes in alliances and the balance of power due to climate change disruptions as significant or higher risks to global security by 2040. Additionally, 48% of respondents identify military mission failures resulting from a succession of climate-related threats and disasters as significant or higher risks within this timeframe".

Critical ecosystem loss, increases in the tempo and scale of natural disasters, declines in water security, and increases in involuntary migration are identified as the top four climate change-driven risks to the global security environment.

The Report by the expert group of the International Military Council on Climate and Security unequivocally demonstrates that climate change is a national and global security issue. It emphasizes that international security experts have a responsibility to prepare for and prevent the security risks associated with climate change, as well as a responsibility to collaborate in the face of this unprecedented threat.

Given the complex and dynamic nature of the security risk environment, it is challenging to delineate specific timelines. However, the survey results offer valuable insights into how security and military professionals, with their experience and

expertise, perceive the impact of climate change on global security within this intricate system. These results highlight the need for experts to take preventive and immediate actions to address climate change risks. The fundamental elements required for securitization, such as awareness, articulation, and the preparation of action plans, are already in place.

There is an increasing trend among UN Member States, regional, and sub-regional organizations to support the integration of climate change considerations into peace and security activities. Mediators can leverage international and regional platforms to garner political support for climate-related mediation processes.

As Demirdogen (1993) explains, “NATO's concept of a "system of nested institutions" for international peacekeeping serves as a multilateral security cooperation mechanism. Within this mechanism, organizations like the UN, NATO, and the EU serve as the building blocks of the new security system, each possessing comparative advantages in different dimensions and with distinct experiences and expertise. For instance, NATO's integrated military structure and extensive operations offer practical superiority over other organizations, including UN Peacekeeping Forces”.

Dr. Jamie Shea from NATO's Political Planning Division emphasizes that ‘the extent of cooperation among organizations and their respective roles may vary depending on the nature and requirements of the international issue at hand’ (Shea, 1992). It is crucial to make appropriate decisions regarding which organizations can be more effective as authorizers and implementers within the cooperation mechanism. “Looking ahead, it appears that NATO and the EU will play implementing roles, particularly in Europe, while the United Nations will assume a leadership role” (Demirdogen, 1993).

In addition to global organizations, regional structures within security cooperation organizations play a significant role in fostering common outcomes within specific geographical contexts. Recognizing that the method of conflict resulting from the climate crisis varies across countries and even continents, the mediation activities of

international organizations also vary across different categories to manage the crisis. Each region exhibits unique dynamics and vulnerabilities.[20]

UN Member States, regional, and sub-regional organizations have displayed growing support for integrating climate change considerations into peace and security activities. In this regard, mediators conduct in-depth analyses and draw inspiration from international and regional platforms to attract political support for climate-related mediation processes. The United Nations, in particular, has been actively engaged in these efforts. Given the limited scope of this study, only basic illustrations of three regions are provided.

5.1.1 Mediation Efforts in the Middle East and Africa

The Middle East and African countries are shown as the countries that will be most affected by climate change. “The African Union was established to solve problems such as security, access to clean water, economic instability and low living standards within the continent” (Sahin & Beyhan, 2021) . In the changing global system with the end of the Cold War, it was decided to revise the union with the 1999 Sirte Conference and the current African Union became operational with the Durban Summit in 2002. The continent's rich natural resources and population power are important instruments for the African Union to play its desired role in the global system. However, negative factors such as security problems, terrorism, climate change, infrastructure deficiencies and the weakness of qualified manpower need to be overcome.

Subsequently, the African Union, the African Development Bank and the UN Economic Commission for Africa (CEA) launched the ClimDev Africa program, which enables the effective integration and calculation of meteorological data to support the continuum of sustainability policies in Africa. The African Union, with its

[20] For example, a recent study published in the Proceedings of the US National Academy of Sciences found evidence in global datasets that climate-related catastrophic events increase the risk of armed conflict in ethnically fractionated countries. Their analysis, “based on data on armed conflict risks and climate-related natural disasters between 1980 and 2010, concluded that about 23% of conflict risks in highly ethnically fragmented countries are strongly correlated with climatic disasters such as heat waves or droughts” (Schleussnera, et al., 2016).

Inclusive early warning and dispute resolution mechanisms need to be established or strengthened to address potential conflicts predicted to be exacerbated by climate change. Inclusion of diverse social perspectives, including conflict-affected populations, in early warning and dispute resolution mechanisms is key to effectively anticipate and mitigate climate-related risks and impacts.

peacebuilding and development mandate, has a critical role in highlighting climate change as a threat to peace and security.

“On the 50th anniversary of the Union, in May 2013, African Heads of State stated their ambition to make Africa a global powerhouse by 2063. The Agenda 2063 vision aims to build environmentally sustainable and resilient economies and communities. It includes the use of adaptive measures to sustain the continent's rich biodiversity, forests, landscapes and water resources and to address the risks posed by climate change”. (African Union, 2022)

“ClimDev from the Intergovernmental Authority on Development (African Union), the Economic Community of West African States Early Warning Mechanism (ECOWARN) and the Conflict Early Warning and Response Mechanism (CEWARN) demonstrate a strong regional focus on water management and food security. Additional programs aimed at providing a regional strategic food reserve (such as ECOWAS together with the EU and UN) and water resources (such as the Permanent Inter-State Committee on Drought Control in the Sahel) have come directly online”. (Chauzal, 2015)

“CREWS (Climate Risk and Early Warning Systems), launched during COP21 in Paris in 2015, strengthens climate warning systems and coordinates the management of response to extreme weather events among Small Island Developing States and Least Developed Countries, most of which are located in Africa” (IMC, 2020).

An example of mediation activities for African countries is the United Nations Office for West Africa and the Sahel (UNOWAS), which was established in Senegal in 2002 through preventive diplomacy and political mediation in order to prevent future climate crises and other conflict risks.

UNOWAS has been a spokesperson on the importance of climate security in Africa in various international forums. In 2016, Mohamed Ibn Chambas, the Special Representative of the United Nations Secretary-General for West Africa and the Sahel, made a statement to the UN Security Council on the impact of climate change on peace and security in the region, emphasizing the urgency of addressing climate change to “halt the deterioration of living conditions in the Sahel, near Lake Chad and along the coasts, as well as the depletion of livestock herds and fish stocks” (Security Council Press Release, 2016).

The UNOWAS vision is an example of familiarization efforts on climate change in the region. Overall, these initiatives and organizations demonstrate the commitment of the Middle East and Africa region to mediate the climate crisis through collaborative efforts, regional cooperation, and sustainable solutions.

5.1.2 Mediating Climate Issues in the Arctic Region

The increased interest in the Arctic, which was politically and militarily important during the Cold War, has been driven by the consequences of climate change.[21]

"According to classical theories, the Arctic Region, which was defined as 'inaccessible' due to being covered by glaciers, has become 'accessible' with global warming and has become the focal point of new geostrategic and geopolitical competition. In this respect, the Arctic has come to be known in the literature as the 'New Great Game', the 'Great Arctic Game', the 'New Cold War' and the 'Great Arctic Chessboard'. The density of hydrocarbon energy resources in this region, which does not belong to any state, and the shortened maritime trade routes that can be used in longer periods with the melting of the glaciers are the most important factors in the increasing interest in the Arctic Region" (Tutan, etc., 2020).

"The US Coast Guard estimates that the Arctic holds 13% of the world's undiscovered oil, a third of the world's undiscovered gas, and more than a trillion in gold, platinum and other minerals in US dollars" (Yoanna, 2019).

The dynamics between NATO member states are an obstacle to a more comprehensive consideration of the Alliance's role in the climate-changed Arctic. The changing security competition over the Arctic involves NATO members as well as Russia, which members characterize as a potential adversary.

Mediators can support the parties in considering options to include the ongoing and potential future impacts of climate change in the negotiating design. For example, territorial claims over resources and sea lanes resulting from climate change may already be causing tensions between NATO allies and Russia. Conflicting parties may

[21] Post-Cold War research has revealed the existence of potential hydrocarbon resources in the region and it has been determined that the reserves in the region are 25% of the world's untapped reserves. According to recent research, the Arctic is among the regions that will be most affected by the risks of climate change. It is reported that average temperatures in the Arctic are increasing by two to three degrees Celsius per year and the sea ice cover is gradually decreasing.

be reluctant to include climate change considerations in negotiations if they perceive that mediators are imposing the issue. They are more likely to include climate-related issues in negotiations if mediators create an environment that allows for careful consideration of relevant impacts.

To this end, mediators could propose strategies or initiate actions to integrate climate considerations as confidence-building measures or entry points for cooperation, or pursue approaches that address the impacts of climate change as a conflict factor.

"As fish stocks migrate to warming Arctic waters, the Agreement to Prevent Unregulated High Seas Fishing in the Central Arctic Ocean, signed in 2018 by several countries, including the United States, China and Russia, is an example of cooperative action to address knowledge gaps for fishing and ensure sustainable management of an emerging fishery in a long inaccessible area" (MOFA, 2021).

Speaking about the challenges of environmental securitization, the Copenhagen School states that "The cost of adopting the scientific agenda within national societies is highly unequally distributed: For example, the fisheries management agenda is less likely to transform traditional fisheries science communities in Europe than it is to transform white-collar workers in Brussels" (Buzan, Wæver , & Wilde, 1998). We can humbly say that in the decades that have passed since this assessment, the climate crisis has become much more important than expected.

As seen in this example, parties facing the prospect of conflict can sign a peace agreement to maximize climate-related opportunities for inclusive, effective and sustainable outcomes.

5.1.3 Mediating Initiatives in the Asia Pacific Region

The Indo-Asia Pacific region is one of the regions facing climate change conflict risks due to instability and migration. The fact that the Indo-Asia Pacific region is the most prone to natural disasters raises security concerns. Involuntary migration increases due to natural disasters, especially in regions close to the coast, cannot be ignored. "In 2018, extreme weather displaced more than six million residents in five Southeast Asian countries" (Betancourt, 2020).

“Changes in the oceans in particular pose an existential threat to the region's major coastal cities and island nations” (Holland & Babson, 2017).

Pacific Island countries on the frontlines of climate change have taken steps to address the institutional climate security gap. In 2018, Pacific Islands Forum (PIF) leaders affirmed through the Boe Declaration on Regional Security that climate change is the greatest threat facing the region.

In 2019, at their 50th meeting in Tuvalu, leaders issued the Kainaki II Declaration on Urgent Climate Change Action, the strongest statement on climate change ever issued collectively by the Pacific Islands Forum. In 2019, at the South Pacific Defense Ministers Meeting (SPDMM), military leaders gathered in Fiji and issued a statement affirming the Boe Declaration that “climate change poses the greatest threat to the livelihoods, security and prosperity of Pacific peoples” (Fiji, 2019).

In 2020, at the 10th Pacific Islands Conference in Noumea, New Caledonia, it was stated that the UNFCCC should consider how to create synergies between the Ocean Climate Dialogue and other Multilateral Environmental Agreements (MEAs e.g. CBD, ISA, IMO) and other instruments. This also includes the need to reassess the provisions of the United Nations Convention on the Law of the Sea (UNCLOS) and the United Nations Common Fish Stocks Agreement (UNSFA) as legal frameworks for managing transboundary fisheries resources in the face of climate change. UNCLOS and UNSFA are particularly necessary as they were developed before widespread awareness of the impacts of climate change. “Revised legal frameworks are needed to ensure fair and sustainable management processes for fish stocks affected by a warming ocean” (SPRED, 2020).

Experts who can conduct regional assessments are needed to design a climate compatible agreement that takes into account the future impacts of climate change in these vulnerable regions. The possibility that changing precipitation patterns and seasonal migration patterns can have unexpected impacts and render agreements obsolete within a few years is one of the main concerns related to climate change. Here, mediators may recommend involving local governments in modifying the agreement or setting up monitoring systems that can address climate change-related issues.

Brokering higher funding and investment for maritime economies to adapt to climate change is another recommended approach. There have been calls for cooperation between the public, business and civil society sectors. Understanding how conflict-sensitive resource allocation can reduce the likelihood of such opportunities causing conflict and competition is crucial to the successful exploration of climate-related cooperation and finance opportunities.

Given the limited experience so far with climate finance spending in fragile and conflict-affected regions and the associated challenges, monitoring the allocation and utilization of such resources is essential.

In conclusion, it should be emphasized in this chapter that developed countries have completed the Industrial Revolution and as a result have started to adapt their industries to green transformation. Many other countries, still in the midst of the industrial revolution, are trying to integrate the risks and consequences of climate change in a neutral way.

Many historical insecurities, the colonial nature of existing economies and the insecurities of weak societies can create difficulties in bringing risks to the agenda. For this reason, equitable solutions and mediation activities that can provide reconciliation between the parties should be increased as one of the stages of security.

5.2 The United Nations's Role in Building International Peace in the Face of Climate Crisis

"The United Nations, established after World War II, expanded the understanding of peace by emphasizing the importance of justice. It defined itself as an institution of international order based on justice, arguing that anything against justice poses a threat to peace" (Soltani, 2005). "The United Nations system is significant in that it incorporates the principles of human rights, recognizing that respect for human rights is essential for national order, justice, and international peace" (Sur, 2012).

In a multipolar world order, traditional security approaches are insufficient to address the complex problems we face. The United Nations recognizes this and has "broadened its scope to protect international peace through international conventions on human rights, social order, and justice" (UN,2018). The International Covenant on

Civil and Political Rights, for example, includes the right to life as a fundamental right that states must protect through appropriate legislation and measures.

Furthermore, the United Nations acknowledges that "environmental degradation, climate change, and unsustainable development pose urgent threats to the right to life of present and future generations" (UN,2018). States are expected to take measures to protect the environment, combat climate change, and ensure the sustainable use of natural resources.

The United Nations has played a significant role in addressing the causes of climate change. The 1972 UN Conference on the Human Environment in Stockholm marked "a milestone in international efforts to address environmental concerns" (UN,1972), leading to the establishment of the United Nations Environment Programme (UNEP).

The concept of peace has evolved to include social justice, stability, and the establishment of institutions based on justice. The United Nations, with its focus on human rights and environmental protection, plays a crucial role in promoting lasting peace in the international community.

In 1988, the World Meteorological Organization (WMO) and UNEP established the Intergovernmental Panel on Climate Change (IPCC) specifically to provide an independent and detailed assessment of the scientific evidence on this issue. The IPCC has contributed significantly to the understanding of climate change through reports and numerous smaller analyses. All these multinational efforts have been at the forefront of the securitization of climate change.

"The obligation of states to develop sustainable, pollution-free policies to protect the environment was first established at the United Nations in 1972 in the Stockholm Declaration of the Conference on the Human Environment, which adopted two important ideas: First, the environment is a global asset, and Second, protection for human rights and development is a necessary condition for the promotion of international peace and security" (Ragazzi, 1997).

The recent analyses of the IPCC, established in 1988 by the World Meteorological Organization of the United Nations and the United Nations Environment Programme to assess the risks of climate change caused by human activities, are therefore important for understanding the role of the United Nations in building security.

The main conclusions of the IPCC AR5 include the following, which are directly quoted (IPCC, 2014a):

- "Human influence on the climate system is clear.

- Recent climate changes have had widespread impacts on human and natural systems.

- Continued greenhouse gas emissions will cause further warming and long-term changes in all components of the climate system, increasing the likelihood of severe, widespread and irreversible impacts for people and ecosystems.

- Adaptation and mitigation are complementary strategies to reduce and manage climate change risks.

- Significant emission reductions over the next few decades can reduce climate risks in the 21st century and beyond, increase prospects for effective adaptation, reduce the costs and challenges of mitigation in the long term, and contribute to climate-resilient pathways for sustainable development.

- Effective implementation depends on policies and cooperation at all scales and can be enhanced through integrated responses that link adaptation and mitigation with other societal goals".

Also in 2019, the IPCC published a Special Report on Climate Change and Land, which addresses greenhouse gas fluxes in land-based ecosystems, land use and sustainable land management in relation to climate change adaptation and mitigation, desertification, land degradation and food security. Key findings include the following, which are directly quoted (IPCC, 2019c):

-" Human use directly affects more than 70% of the global, ice-free land surface. Land also plays an important role in the climate system. Climate change has contributed to desertification and land degradation in many regions, in addition to negatively affecting food security and terrestrial ecosystems. Changes in land conditions resulting from land use or climate change affect global and regional climate.

- Pathways involving higher demand for food, feed and water, more resource-intensive consumption, and more limited technological improvements in production and agricultural yields result in higher risks from water scarcity, land degradation and food insecurity in drylands. Most of the response options assessed contribute positively to

sustainable development and other societal objectives. Sustainable land management, including sustainable forest management, can prevent and reduce land degradation, maintain land productivity and sometimes reverse the negative impacts of climate change on land degradation". It can also contribute to mitigation and adaptation. In 2022, the IPCC's Sixth Assessment Report (AR6) introduced a greater focus on risk and solution frameworks compared to previous reports. Direct quotes from the IPCC AR6 (IPCC, 2022) include the following:

-"The risk framework in this report covers all three Working Groups of the IPCC, considers risks arising from responses to climate change, and takes into account dynamic and sequential consequences.

-The report provides a more detailed assessment of risks to people and ecosystems across different geographical areas and scenarios.

-The focus on solutions encompasses the interlinkages between climate responses, sustainable development, transformation, and governance implications in the public and private sectors.

-The assessment includes climate-related decision-making, risk management, climate-resilient development pathways, implementation and assessment of adaptation, as well as limits to adaptation, loss, and damage.

-The report highlights specific focus areas, such as cities, that are increasingly important for implementing climate responses.

-There is an emerging emphasis on social justice and the inclusion of diverse forms of expertise in addressing climate change.

-The AR6 places comprehensive focus on the role of transformation and the urgency of rapid climate action in achieving societal goals. It incorporates a more detailed assessment across various sectors and regions, drawing on multiple disciplines and expertise".

Despite ongoing efforts and measures addressing environmental concerns, scientific projections indicate that climate change will persist for the foreseeable future. The recognition of climate change as a reality and the understanding of its causes and consequences underscore the long-term negative security consequences.

The potential failure of state efforts to address these international threats may necessitate the implementation of more coercive measures.

Within the United Nations system, the Security Council holds comprehensive coercive enforcement authority to address international threats. Comprised of five permanent members and ten non-permanent members, the Security Council acts on behalf of all UN Members and has been entrusted with the primary responsibility for maintaining international peace and security. The Security Council has the exclusive power to investigate disputes or situations that may lead to international friction and determine their existence. “Since the end of the Cold War, the Security Council has been actively engaged in finding solutions to non-traditional security challenges” (Penny, 2007).

While Members of the United Nations are not legally obligated to comply with emerging recommendations of the Security Council, the Security Council operates based on the express consent of its Members for specific measures. Article 25 of the UN Charter states that “Members agree to accept and implement the decisions of the Security Council in accordance with the Charter” (ICJ, 1945).

Climate change, due to its potential to destabilize international impacts, can be seen as a security challenge similar to traditional security concerns. This includes issues like climate refugees, border disputes, resource inequality, and disruptions to justice and peace. In recent years, the Security Council has increasingly considered major human rights disasters within sovereign states as justifications for heightened measures.

The designation of domestic human rights disasters as threats to international peace and security by the Security Council has a solid legal basis, even if the manifestations are primarily domestic. Analyzing the evolving interpretation of Security Council legal authority, particularly in the context of non-traditional threats, is necessary. Applying this legal framework to climate change and utilizing the Security Council's binding decision-making authority, along with political will, could enable climate change to be addressed as a matter of common security.

However, in many member states, mandatory international measures to address climate change face resistance. The United Nations has various mechanisms in place to address adaptation to climate change, including voluntary implementation of

national legislation, international negotiations, and capacity-building assistance. If these mechanisms prove insufficient to halt the causes and consequences of climate change, it is important to understand the Security Council's authority to request state intervention and its legal and political limitations.

The Security Council holds unique legal authority to address threats to international peace and security. Climate change may require a similar response justified on the same basis and consistent with the expanded scope of the Security Council's authority since the end of the Cold War. Therefore, if climate change leads to actual interstate or intrastate armed conflicts by contributing to destabilizing resource scarcity, the Security Council has clear legal authority to take action to restore international peace and security in affected countries.

Conflicts associated with climate change involve issues familiar to states from traditional security understandings, including direct and immediate transboundary threats to peace. The scope of the Security Council's mandate to address the underlying causes and global security implications of climate change is debatable. It is uncertain to what extent the Security Council can adopt enforcement measures to prevent, minimize, and adapt to the long-term security consequences of climate change rather than simply reacting temporarily to its indirect violent consequences.

5.3 NATO's Environmental Security Strategies : Addressing in the Climate Crisis

In the post-Cold War era, the transformation of state relations into interdependencies has highlighted international interests. Additionally, in a globalizing world, the security of societies and individuals has become as important as state security, leading to the emergence of new approaches that prioritize human security. These two fundamental changes have played a crucial role in shaping NATO's new security strategy[22] within the framework of changing security approaches.

[22] "The fall of the Soviet Union, the independence of many Warsaw Pact countries created new political dynamics with a reorientation of political orientation. While some Warsaw Pact countries allied themselves with NATO and Western Europe, the states of the former Yugoslavia saw their attempts to establish independence spiral into internal turmoil and armed conflict that destabilized the Western Balkans throughout the 1990s. These conflicts have left Western Europe and many NATO allies facing an ongoing security and refugee crisis in their neighborhood. This new security dynamic, very different from those encountered during the Cold War, forced NATO to adapt or 'transform' itself into a

NATO, originally established as a military defense organization, has started to assume a more active role in the political and economic sectors, leveraging its military identity to address challenges related to accessing energy resources and protect its members. By redefining itself in this context, NATO has initiated plans, measures, and steps to ensure its own security beyond traditional military operations. These new initiatives represent NATO's clear intention to transform from a purely military organization into a flexible and global security alliance, incorporating both in-field and out-of-field activities, as its original purpose has evolved.

"NATO's transformation aims to enable the organization to rapidly adapt to an uncertain and increasingly complex global security environment while actively participating in shaping it" (Kriendler, 2006). For decades, NATO and international security experts have been raising concerns about the risks posed by climate change. When addressing the national security implications of climate change, primarily driven by global warming, NATO focuses on two interrelated issues.

Firstly, NATO considers how climate change will impact its installations and military operations, particularly in terms of responding to natural disasters, which can strain military capabilities and divert resources from other military objectives. Secondly, NATO recognizes the potential for climate change to give rise to political and national security threats, including the potential for conflicts. The organization has consistently highlighted the challenges that climate change poses to military infrastructure, operations, and systems.

"To be considered security challenges, threats and vulnerabilities must meet specific criteria that differentiate them from normal political functioning. These challenges must be portrayed by a securitizing actor as existential threats to a specific object of reference, thereby justifying the implementation of emergency measures that go beyond normal binding rules" (Buzan, Wæver, & Wilde, 1998).

In the first statement, it is highlighted that extreme and unexpected weather events resulting from climate change have a direct impact on NATO's air military operations, naval bases, and the strategic situation in the Arctic. "Several instances of the

peacekeeping and post-conflict stabilization organization. The post-Cold War era has forced NATO to adopt a new ethos, develop new capabilities, create new policies and programs, and operate in fundamentally different ways from the past" (Lippert, 2019).

vulnerability of military installations to climate change effects are cited, such as flooding at Keesler Air Force Base and Tyndall Air Force Base, as well as major flooding at Offutt Air Force Base" (Crawford, 2019).

Additionally, increasing ambient temperatures and changing air density can have negative effects on aircraft performance and air transportation capability. "Preventing overheating of military aircraft and installations requires more logistical effort and higher energy consumption. The vulnerability of coastal roads, which serve as transportation routes, to extreme weather conditions is also mentioned" (Ciotta, 2022). Recognizing climate change as a security challenge, NATO is investing in climate adaptation technologies to reduce military emissions and enhance climate resilience.

In the second statement, climate change is characterized as a threat multiplier that affects NATO's operations and missions in both the Euro-Atlantic region and the broader Alliance neighborhood. It poses challenges for military forces in fulfilling their missions and can shape the geopolitical environment, leading to instability and geostrategic competition. This creates conditions that can be exploited by state and non-state actors that pose threats or challenges to the Alliance.

The Arctic region is specifically mentioned as an area where climate change and its consequences, such as the melting of polar ice caps, have significant implications. The changing Arctic landscape allows for increased maritime access and resource exploration, further intensifying geostrategic competition. "The shared interest and responsibility of all NATO member states in the Arctic are highlighted, emphasizing the need for collective Allied engagement" (Smith-Windsor, 2013).

NATO officially recognized climate change as a security challenge for the first time in its 2010 Strategic Concept. While it was mentioned in the strategic document, it is noted that NATO has recently begun taking concrete actions to address climate change. The 2010 Strategic Concept acknowledges that "environmental and resource constraints, including climate change, will continue to impact the security environment in regions relevant to NATO" (Lisbon Summit, 2010).

Indeed, NATO has taken significant steps to address the impact of climate change on security. In 2021, NATO developed and adopted the Climate Change and Security Action Plan, which serves as an executive tool for the practical implementation of

climate change considerations within the Alliance. The Plan acknowledges climate change as one of the defining challenges of our time and recognizes it as a threat multiplier that affects Allied security in both the Euro-Atlantic region and the wider Alliance neighborhood.

The key points highlighted in the Plan emphasize the impact of climate change on the security environment. It notes that climate change makes it more challenging for militaries to fulfill their missions due to extreme temperatures, sea-level rise, changes in precipitation patterns, and the increasing frequency and intensity of extreme weather events. These factors test the resilience of military facilities, critical infrastructure, and operational capabilities, ultimately affecting military effectiveness.

Furthermore, the Plan acknowledges that climate change shapes the geopolitical environment and can influence state behavior. Thawing permafrost, desertification, and the opening of new transport routes are identified as factors that can contribute to increased instability and geostrategic competition.

The consequences of climate change, including drought, soil erosion, and marine environmental degradation, are highlighted as well. These can lead to famine, floods, loss of land and livelihoods, disproportionately impacting vulnerable populations, and potentially exacerbating state fragility, conflict, and displacement. The Plan recognizes that “climate change can contribute to migration and human mobility, which can be exploited by state and non-state actors challenging the Alliance” (NATO,2021).

The 2021 NATO Climate Change and Security Action Plan characterizes climate change as a threat multiplier, emphasizing its impact on military capabilities, state behavior, regional instability, and the vulnerability of marginalized populations. This represents a significant shift in the recognition of climate change as a security concern comparable to traditional threats.

The importance of addressing the climate challenge from a security perspective has been heightened within NATO due to its adaptation process and the impact of the Russia-Ukraine conflict on energy security. The energy security dilemma has highlighted the need for reduced instability and greater self-reliance in the energy

sector. In response, NATO has intensified its efforts to urgently address the climate crisis while prioritizing long-term security goals.

Overall, NATO's recognition of climate change as a security challenge and its efforts to integrate climate considerations into its strategic approach demonstrate a growing awareness of the complex interactions between climate change, security, and international stability.

According to the NATO 2022 Strategic Concept, “the issue of NATO's role in responding to climate change was addressed during the negotiations on the new strategic framework. At the NATO summit in Madrid, the Alliance aligned both the political and military aspects, highlighting the significance of the climate challenge on the agenda” (Tardy, 2022).

Article 46 of the Strategic Concept states that NATO aims to become the leading international organization in understanding and adapting to the security impact of climate change. It outlines NATO's commitment to assessing the impact of climate change on defense and security, as well as addressing these challenges. The Alliance intends to contribute to the “fight against climate change by reducing greenhouse gas emissions, improving energy efficiency, investing in clean energy sources, and leveraging green technologies, ensuring military effectiveness and a credible deterrent and defense postüre” (NATO, 2022).

The Strategic Concept emphasizes four key functions that NATO proposes to fulfill in response to climate change. These functions include conducting an annual climate change and security impact assessment, incorporating climate change considerations into resilience, preparedness, defense planning, and disaster response efforts, contributing to climate change mitigation through emission assessment programs and reduction targets, and improving communication with international and regional organizations, as well as civil society actors, to contribute to the global response to climate change.

The inclusion of climate change in the new NATO Strategic Concept signifies a significant advancement in institutionalizing climate change within the Alliance. The Strategic Concept serves as a “foundational document guiding NATO's strategic

coherence and shaping its future political and military developments, second only to the North Atlantic Treaty" (Tardy,2022).

In conclusion, the recognition of the significant impact of climate change on the world and human populations underscores the need for NATO to enhance its effectiveness in addressing this global challenge. NATO's current policies, crisis management capabilities, and planning mechanisms position it to lead in mitigating risks associated with climate change.

NATO's role in addressing climate change as a security challenge involves identifying and assessing future climate-related stressors. By fulfilling this function, NATO enables member states and partners to collectively respond effectively to these emerging challenges.

NATO has various established programs, policy mechanisms, and military resources that can be leveraged to prepare itself and its partners for a substantial role in climate security. The alliance acknowledges that the strategic significance of environmental and security-related interests may necessitate the allocation of military resources and the development of new policy initiatives to safeguard its members in the face of climate change. The aforementioned examples demonstrate that NATO not only recognizes the impact of climate change on international security but has also been dedicating resources to address security challenges arising from climate change for some time.

6. THE ROLE OF INTERNATIONAL LAW IN SECURING THE CLIMATE CRISIS : COMMITMENTS, PRINCIPLES, AND ACTIONS

The fight against climate change necessitates international responsibility for the actions of states, aligning with general principles of international law, particularly those related to the environment. International law and agreements play a crucial role in recognizing climate change as a security issue. Numerous bilateral and multilateral agreements have been established, addressing various aspects of climate change, from biodiversity to habitat protection. It is important to note that this section focuses on generally accepted parts of these agreements.

Climate change emerged as a significant international problem in the late 1980s, leading to legal initiatives by international organizations and states. Many of these laws are based on treaties adopted under the United Nations Framework Convention on Climate Change (UNFCCC) of 1992. Key agreements include the 1997 Kyoto Protocol and the 2015 Paris Agreement, along with numerous decisions made by the parties to these documents.

While the UNFCCC addresses both mitigation and adaptation, the initial focus during its first decade was primarily on mitigating the impacts of climate change. Developing countries, in particular, have sought financial assistance and other means of implementation, such as technology transfer and capacity building.

Climate change has intergenerational consequences due to its long-term and potentially irreversible effects. It results from a wide range of production and consumption processes, requiring collective action. Since the benefits of mitigating climate change are often shared globally rather than accruing solely to the acting country, individual states may lack the motivation to take independent action.

However, securing collective action through international agreements has proven to be extremely challenging. “International law faces difficulties in resolving collective action problems, as it lacks robust mechanisms to ensure participation and

compliance. States are provided with only limited assurance that others will respond if they take action" (Barrett, 2003). Climate change encompasses numerous aspects of a state's domestic policies, including energy, agriculture, transportation, and urban planning, with significant economic implications. States have diverse interests, priorities, capacities, and perspectives, further complicating compliance with international agreements. There are substantial disparities between states in terms of development levels, greenhouse gas (GHG) emission profiles, and vulnerability to climate change impacts. The countries primarily responsible for causing climate change may not necessarily experience the most immediate consequences.

For instance, small island states that bear the brunt of climate change impacts have a compelling incentive to act. On the other hand, the Organization of the Petroleum Exporting Countries (OPEC), whose members heavily rely on fossil fuels and have high per capita GHG emissions, may have reasons to delay action, particularly in the short term. Many large developing countries face the challenge of providing energy access to a significant proportion of their populations. Given these complexities, international law is unlikely to produce readily accepted solutions to climate change.

In this regard, the most pragmatic approach to addressing climate change is to comprehensively analyze the risks associated with the issue at the international level and integrate it into the legal systems and policies of each state at the national security level. It is crucial to clearly define the fundamental sovereignty and survival rights of both states and individuals concerning climate change within the framework of international law, and for states to adapt their laws accordingly.

This chapter examines the gradual codification of legal processes since the 1980s to address the global ramifications of climate change. It covers general principles of international law related to state responsibility for sustainable global atmospheric conditions, specific treaty laws and other developments concerning climate change, and the potential links between climate change, environmental preservation, and human rights.

The content of this chapter draws on Handbooks 1 and 3 of International Law prepared by the United Nations. It provides information that is generally applicable, focusing specifically on the securitization context and analysis methods outlined in 'A Security Framework'.

6.1 Relevant Principles of International Law

Much of international environmental law has developed from so-called 'soft law' ideas, which are not legally binding per se but lay the groundwork, in addition to 'hard law' sources that contain legally binding responsibilities on climate change. The Stockholm Declaration of the United Nations Conference on the Human Environment (1972) and the Rio Declaration on Environment and Development adopted by the United Nations Conference on Environment and Development are the two best-known 'soft law' documents in this category.

A significant number of legal obligations that directly or indirectly regulate the rights and duties of States to protect the environment have emerged as a result of combining traditional sources of international law with specific sources of environmental law, both binding and non-binding.

Three international agreements have formed the basis for worldwide cooperation in the fight against climate change. The United Nations Framework Convention on Climate Change and the Kyoto Protocol, both of which enjoyed widespread support when they were created in 1992 and 1997 respectively, are the result of efforts made since the late 1980s to reduce human influence and pressure on the climate. The convention and protocol developed legal frameworks for limiting and reducing greenhouse gas emissions from humans. Technology and financial transactions have increased the efficiency of international carbon trading. In 2016, the last and most important of these agreements, the Paris Agreement, entered into force.

6.1.1 State Responbility in Climate Governance

In international law, the term ‘state responsibility’ refers to a specific breach of a duty, which can be derived from treaty law or customary international law. The basic theory of State responsibility holds that if an international commitment is breached and the State is involved, the State is responsible under international law.

Actions or inactions for which the State is responsible can be attributed to its organs, to individuals or organizations that are not state entities but are permitted by state law to perform state functions, or to individuals or teams acting on behalf of the State.

Since various state and non-state entities can contribute in various ways to the factors causing climate change, it is almost impossible to determine whose misconduct can be causally linked to harmful consequences. In the latter case, as it is the atmosphere that is affected and not necessarily a specific state interest, it becomes equally problematic to identify the damaged situation for the purpose of reparation.

'Liability' is a legal institution, arising from any harmful act prescribed by positive law and requiring compensation for the damage. The issue of liability is qualitatively the same in every legal order, regardless of the field. The problem, in its most summarized form, is to compensate for the occurrence of a harm. The damage may possibly arise from the following acts:

- "Private and reciprocal relations between individuals, as well as crimes committed,

- Acts of a State that violate the special or general interests of other States or even the interests of the international community,

- Inadequacy and malfunctioning of state services for the prevention and repair of damage" (Ali, 2006).

The above-mentioned harms overlap with many harms previously recognized by states in the emergence of climate change as a security problem. However, it is not easy to take measures against climate change directly within the scope of a state responsibility. This is because climate change covers a process that is said to have started with the Industrial Revolution. Its damages have only been on the agenda for the last 50 years. In this respect, it is important to use the principle of equity when determining sanctions according to state responsibilities for the global problem that all states contribute to a greater or lesser extent.

Climate change is an issue where states have started to take new steps in taking responsibility due to its direct relation to the protection of human rights, its characteristic of being a result of the effects of environmental damages caused by states for reasons not previously restricted by international law, and the lack of the existence of political will with the necessary competence that is not willing to act sufficiently on conventions.

States' responsibilities on climate change are being pursued through multilateral adaptation procedures established in terms of the relevant agreements themselves,

which aim at the agreed and negotiated implementation of the differentiated responsibilities of States Parties under an agreement-based monitoring mechanism.

Chapter 5 provides an example of mediation activities. These procedures do not replace the usual, rigid judicial remedies for dispute settlement in international law, but only complement them.

6.1.2 The Principle of Good Neighborliness

In Article 2 of the Rio Declaration, which is shown as the adoption of a set of principles for States to adopt environmentally sensitive forms of governance, it is stated that "States recognize, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to use their own resources in accordance with their own environmental and development policies and that activities within their jurisdiction or control shall not harm the environment of other States or areas beyond their national jurisdiction" (UN, 1992).

Climate change is a combination of many areas related to production and consumption, with greenhouse gas emissions being the primary example. In this case, states especially affect their neighbors, which are located in the same region and have similar regional sensitivities. Droughts and rising sea levels are two important consequences. They are particularly effective at borders, both within the scope of international waters and due to temperature increases.

Article 19 of the Rio Declaration states that "States shall provide early and timely notification and relevant information to potentially affected States about activities that may have a significant transboundary environmental impact and shall consult with them at an early stage and in good faith". Policymakers in the climate change resolution process are advised in the preamble to this article.

In the previous sections, the example of the Egyptian-Ethiopian conflict has shown that two states sharing the same river borders face the possibility of conflict when national interests and losses are at stake. Since border issues, which are sometimes resolved through the mediation of third states, are currently evaluated on the basis of projected outcomes, it is unlikely that climate change will be clearly defined in international law and fully articulated within the framework of the principle of good neighborliness.

The principle that a state should not allow its territorial integrity to be compromised for actions that could jeopardize the territorial integrity or political independence of another state is based on the fundamental norm of international law that prevents states from threatening or using force against another state. In this context, it is now an established principle of customary international law and a cornerstone of international environmental law that states have the sovereign right to exploit their natural resources for their own purposes in accordance with the Charter of the United Nations and the principles of international law.

At the same time, and as an integral part of this right, states have a duty to ensure that activities within their jurisdiction or control do not harm the environment of other states or areas beyond their national jurisdiction. The duty of a state to exercise control over activities under its jurisdiction or control is expressed in the Rio Declaration as 'the prevention of pollution and other environmental damage, even when it occurs in areas beyond its jurisdiction'. It is closely linked to the duty to develop, through international cooperation, international and national law on the responsibility and compensation of victims.

The principle of good neighborliness also requires a state to take preventive measures where necessary to avoid activities carried out within its territory under its control or jurisdiction that could cause significant damage to another state's environment or areas outside its jurisdiction.

To act in a preventive manner, states may need to adopt a precautionary approach to assessing the risk of future harm that may require prior action. The sustainability of the principle of good neighborliness requires states to protect the right to the environment as a priority through their national laws. As an example, Article 20a of the German Constitution states, “The State, which is also responsible for future generations, protects natural living resources and animals within the framework of the constitutional order by legislative, executive and judicial bodies in accordance with the law and the law” (Gunes, 2009).

In essence, a state's obligation to take preventive measures is a due diligence on the conduct of that state. In the field of environmental law, this obligation is often applied in relation to information exchange, notification, consultation and monitoring where the activities over which states exercise control involve a significant risk of

environmental damage. In harmonizing the supply and policies of the states mentioned in the previous chapters with climate change, legal validity will be integral within all organs of the state.

6.1.3 Contractual Obligations in Climate Agreements

The primary source on the conclusion, entry into force, interpretation, enforcement, invalidity and termination of treaties is the 1969 Vienna Convention on the Law of Treaties. At the international level, a state establishes its consent to be bound by a treaty through ratification, acceptance, approval or accession. For a treaty to have domestic legal effect, an additional act of incorporation is usually required in accordance with national law.

Once a treaty enters into force and becomes binding, a state is legally bound to uphold its provisions. Regardless of the source of the legal obligation, the duty of good faith is recognized as one of the guiding principles that guide the development and fulfillment of legal duties in international law. Increasingly important in many sectors, including those related to environmental protection, international cooperation is inherently based on the values of trust and confidence that underlie this commitment.

Global environmental governance often involves legally enforceable intergovernmental initiatives to reduce environmental problems caused by human activities. The outcomes of these agreements on environmental behavior and outcomes vary widely depending on the characteristics of member countries, the international environment and the underlying environmental problem, as well as on variations in agreement design.

“Since the late 1800s and with increasing regularity over the last half century, countries have negotiated hundreds of international legal agreements to address environmental problems that they cannot solve alone. Conventions addressing ozone depletion, climate change and biodiversity are well known, but governments have also signed global, regional and bilateral agreements to reduce pollution of oceans, regional seas, rivers and lakes; reduce overexploitation of numerous species of fish, birds and land and marine mammals; and slow the degradation of wetlands, deserts and other habitats” (Mitchell, 2003).

The negotiation, timing and content of an agreement are functions of the perceived urgency and desirability of resolving the problem in a particular way. These perceptions encompass the causes and consequences of the problem, as well as the political, economic, and changing social characteristics of countries in relation to its resolution. International agreements on climate change, which we can still characterize as 'soft power', have been on the agenda for many years in terms of their urgency.

“For most legal experts, consent to be binding is crucial: Treaties are the documentation of legally binding arrangements between two or more states, whether they are designated as treaties, conventions, agreements or modifications of such arrangements” (Aust, 2013).

Although the establishment of international organizations imposes a limited restriction on the sovereign powers of the state, these organizations do not have much functionality in terms of controlling responsibility, except for peacekeeping. However, they can be quite successful in ensuring securitization.

Due to the lack of an international organization that independently monitors the actions and behaviors of states in international law, the responsibility of a state can be determined within the framework of the sovereignty of the state and the envisaged remedies can be possible only if the responsible state accepts the breach of obligation.

6.2 Evaulating Legal Instruments in Adressing Climate Change : The Paris Agreement and Beyond

6.2.1 The Montreal Protocol and its Climate Implications

The Montreal Protocol is an international agreement signed in 1987 to prevent the destruction of the ozone layer by certain substances. The Protocol aims to control and reduce global emissions of these substances, with the ultimate goal of elimination based on scientific evidence and economic considerations.

“The Protocol defines key terms such as "controlled substances," "production," and "consumption" and describes control measures such as the transfer of production levels between Parties and the adjustment of ozone depletion potential” (UN, 2017).

The primary source of legal obligations to protect the ozone layer is the 1987 Montreal Protocol on Substances that Deplete the Ozone Layer and the 1985 Vienna

Convention for the Protection of the Ozone Layer. “Scientific discoveries in the seventies confirmed that many substances containing the chemical elements carbon, nitrogen, chlorine, bromine, and hydrogen have the potential to alter the chemical and physical properties of the ozone layer in which they reşide” (UN, 1985).

The work and activities carried out within international and national organizations, particularly within the framework of the World Ozone Layer Action Plan of the United Nations Environment Programme, underscore the importance of international cooperation and action based on relevant scientific and technical advice in protecting the ozone layer.

States Parties to the Montreal Protocol are required to take appropriate legislative, administrative, and policy measures to control, limit, reduce, or prevent human activities under their jurisdiction or control that are likely to adversely affect or modify the ozone layer. These measures should take into account the special needs of developing countries while fulfilling their obligations.

The Montreal Protocol, to which 196 countries are parties, is recognized as the most successful multilateral agreement on the environment. For the first time in history, the Montreal Protocol envisaged the restriction of ozone-depleting anthropogenic substances based on a multilateral agreement and scientific results. This success has set a precedent for future environmental diplomacy, including climate change.

Furthermore, “the Montreal Protocol's success in eliminating about 99 percent of ozone-depleting substances and the subsequent Kigali Amendment, which aims to reduce production of powerful greenhouse gases contributing to climate change, highlight the Protocol's significance as a model for addressing global environmental challenges” (Mitchell, 2003).

In summary, the Montreal Protocol is a historic environmental treaty that has become a model for future diplomacy on environmental issues. “It has succeeded in protecting the ozone layer by controlling and reducing emissions of ozone-depleting substances” (UN, Handbook). Its success has paved the way for international cooperation and action in addressing global environmental challenges, including climate change.

6.2.2 The Climate Change Framework Convention : Commitments and Challenges

Signed on May 9, 1992 in New York and entering into force on March 21, 1994, the United Nations Framework Convention on Climate Change (UNFCCC) recognizes "climate change and its adverse effects as a common human problem resulting from increased greenhouse gas concentrations" (UN, 2017).

The Convention emphasizes the need for international cooperation and an effective and balanced response, taking into account the common but differentiated responsibilities and capacities of states, as well as their social and economic circumstances. It establishes the Conference of the Parties (COP) as an annual forum for international discussions on stabilizing greenhouse gas concentrations, leading to subsequent agreements such as the Kyoto Protocol and the Paris Agreement.

The objective of the Convention is to prevent dangerous anthropogenic interference with the climate system by maintaining greenhouse gases at a level that allows ecosystems to adapt to climate change and sustainable economic development to continue. Its principles include "the protection of the climate system based on equality and common but differentiated responsibility, consideration of the needs and special circumstances of developing countries, cost-effective measures against climate impacts, promotion of sustainable development, and cooperation among parties" (UN, 1994).

"While the UNFCCC is considered to have limited political influence compared to other international environmental bureaucracies, it plays a vital role in addressing climate change" (Tompkins & Amundsen, 2008). However, some argue that national compliance with binding emission targets may not be the most effective approach, and more attention should be given to assessing national emissions, policies, and plans.

Addressing climate change is not solely reliant on the wealth and resources of nations but is also influenced by economic growth considerations. Intergovernmental institutions have been established to understand the interconnections between climate change, development, and environmental issues, aiding in fulfilling commitments under the Kyoto Protocol and the UNFCCC.

The significance of integrated institutions becomes increasingly apparent as they help avoid policy mismatches across different political scales. This highlights the need for states to assess the suitability of existing institutions rather than creating new ones for climate change management.

6.2.3 The Kyoto Protocol : Lessons Learned and Future Prospects

"The Kyoto Protocol is an internationally recognized agreement on climate change that was adopted in Kyoto on December 11, 1997" (UN, 2017). Its primary objective is to reduce greenhouse gas emissions to a level at least five times lower than the 1990 levels during the commitment period of 2008-2012. To achieve this, Annex I Parties are required to implement policies and measures aimed at limiting or reducing greenhouse gas emissions not controlled by the Montreal Protocol while also cooperating with other Parties in the implementation of such policies and measures.

The genesis of the Kyoto Protocol can be traced back to the United Nations Framework Convention on Climate Change, as it was crafted as a response to this convention. The Protocol classifies states into two broad categories based on their historical responsibilities: developed countries, known as Annex I countries, and developing countries, referred to as non-Annex I countries. Annex I countries have agreed to reduce their greenhouse gas emissions, and within Annex I, there exists Annex II, which is a subset of Annex I.

To fulfill their commitments outlined in Article 3 of the Protocol, each Annex I Party is required to implement specific policies and measures aimed at achieving quantified emission limitation and reduction. These measures include, but are not limited to: increasing energy efficiency in relevant sectors of the national economy, protecting and enhancing sinks and reservoirs of greenhouse gases not controlled by the Montreal Protocol, promoting sustainable forest management practices, afforestation, and reforestation, promoting sustainable forms of agriculture in consideration of climate change, and conducting research, promoting development, and increasing the use of new and renewable forms of energy, carbon dioxide-removing technologies, and advanced and innovative environmentally friendly technologies.

The Kyoto Protocol is binding on industrialized countries and economies in transition, as it commits them to limit and reduce their greenhouse gas emissions in

accordance with individually agreed targets. “Only these countries are required to adopt and periodically report on mitigation policies and measures, as the Protocol is built upon the principles and provisions of the United Nations Framework Convention on Climate Change, utilizing an annex-based structure” (UN, 2017). The Protocol places a heavier burden on developed countries under the principle of "common but differentiated responsibility and respective capabilities," acknowledging their significant contributions to the high levels of greenhouse gas emissions in the atmosphere.

One notable aspect of the Kyoto Protocol is its provision of innovative market-based mechanisms that Annex I Parties can employ to help meet their more stringent commitments. These mechanisms facilitate climate-friendly investments in other countries and allow for emissions trading.

The Kyoto Protocol officially came into force on February 16, 2005, and it paved the way for the subsequent development of the Paris Agreement.

6.2.4 The Paris Agreement : Assesing Its Efficacy in Climate Security

The Paris Agreement was adopted at the 21st Conference of the Parties to the United Nations Framework Convention on Climate Change (Conference of the Parties to the United Nations Framework Convention on Climate Change) in Paris in 2015 at the end of the negotiation process initiated in 2011. It entered into force in 2016.

The Paris Agreement reviews the adequacy and effectiveness of adaptation efforts, assesses adaptation efforts in developing countries, and reviews progress towards global adaptation goals. Parties need to improve their understanding, action, and support to address climate change-related loss and damage.

“Developed country Parties should provide financing to assist developing country Parties in both mitigation and adaptation and are leading the mobilization of climate change finance from a variety of sources” (UN, 2017).

“The Paris Agreement is a milestone in multilateral efforts to address the threat of global climate change. For the first time, an international agreement to reduce greenhouse gas emissions includes contributions from all major emitters and indeed the vast majority of the world's countries. In addition, the Agreement includes a

dynamic feature whereby mitigation commitments can be strengthened over time" (Stavins, Robert & Stowe, 2016).

In improving the implementation of the Convention, the Paris Agreement aims to strengthen the global response to the threat of climate change in the context of sustainable development and efforts to eradicate poverty. For these purposes, the following articles are defined:

"(a) Reduce the global average temperature to well below 2°C above pre-industrial levels and strive to limit the increase in temperature to 1.5°C above pre-industrial levels, recognizing that this will significantly reduce the risks and impacts of climate change

(b) Enhance the ability to adapt to the adverse impacts of climate change and to improve climate resilience and low greenhouse gas emissions, in a way that does not threaten food production; and

(c) Ensure consistent financial flows with a pathway towards low greenhouse gas emissions and climate-resilient development" (UN, 2015).

As stated in the Agreement, This Agreement shall be implemented in a manner that reflects equality and the principle of common but differentiated responsibilities and related capabilities in the light of different national circumstances. The most important point of difference here from the Kyoto Protocol is that among the parties to the agreement, each of the countries that were previously divided into Annex I and Annex II are responsible as a result of common but differentiated responsibilities without ignoring inequalities in the new agreement. One of the most important points preventing states from making decisions on climate change is that they have assumptions about how effective the problem was in the historical process when it occurred.

The social and political impact of the Agreement is largely due to its new understanding of cooperation against global climate change. This understanding, which treats combating climate change and its impacts as a multi-actor and multi-level joint action issue within the framework of values such as human rights, climate justice, gender equality, intergenerational equity, and ecosystem integrity, is expressed in the Agreement, especially in its preamble and partly in its implementing provisions. "The

Paris Agreement continues international cooperation against climate change in a different way, defined within the framework of a 'new paradigm'. With the Paris Agreement, based on the argument that the annexes system of the Convention and especially the structure established by the Kyoto Protocol was not effective because it led to the exclusion of important parties such as the United States of America (USA) and China, which have the highest share in global emissions, from mitigation action, a new cooperation framework was established that is expected to make all parties partners in mitigation action" (Cerit, 2019).

The Agreement works on an increasingly prominent five-year cycle of climate action by countries. Every five years, each country is expected to submit an updated national climate action plan, known as a Nationally Determined Contribution or NDC. In this respect, the Paris Agreement provides an important data source for the unpredictability of climate change, which causes constant changes in data, and for countries to see their national contributions.

The Paris Agreement provides a framework for financial, technical, and capacity-building support to countries in need. In the framework of the Paris Agreement, the UN reaffirmed for the first time at COP27 that developed countries should take the lead in providing financial assistance to less endowed and more vulnerable countries, while encouraging voluntary contributions from other Parties. Climate finance for mitigation is essential, as large-scale investments are required to significantly reduce emissions. Climate finance is equally important for adaptation, as significant financial resources are needed to adapt to adverse impacts and mitigate the effects of a changing climate.

The Paris Agreement speaks of a vision to fully realize technology development and transfer, both to increase resilience to climate change and to reduce greenhouse gas emissions. It establishes a technology framework to provide overarching guidance to a well-functioning Technology Mechanism. The mechanism accelerates technology development and transfer through policy and implementation levers.

According to the United Nations, "Not all developing countries have sufficient capacity to cope with many of the challenges posed by climate change. As a result, the Paris Agreement places great emphasis on climate-related capacity-building for

developing countries and calls on all developed countries to increase support for capacity-building activities in developing countries" (UNFCCC).

"Each country should identify, plan and regularly report on its contribution to mitigating the impacts of climate change" (UN, 2015). No mechanism forces a country to set a specific emissions target by a specific date, but each target should go beyond pre-set targets.

As a result, key elements of the success of the Paris Agreement are linked to scaling up national contributions. It will be able to approach its goals with the will and political will of countries on climate change. In order to determine the specific national contributions of each country, regional studies have been increased, taking into account the IPCC's latest report. Recognizing that the fight against climate change is a security problem in itself, reducing its multi-sectoral aspect to local governments can provide a more successful way to solve the problem.

The Paris Agreement is the official basis for increasing scientific data on how developed and developing countries should be handled and how to ensure equality between countries, as it is the last agreement that currently exists. In order to increase the binding force of the parties, the scope of deterrence regulating their behavior needs to be expanded and aligned with the strategic interests of the countries.

At this point, we can say that the treaty was created with an expanded security perspective.

6.2.5 Safeguarding Human Rights and Ensuring a Clean Environment

All individuals possess the inherent entitlement to a clean, healthy, and sustainable environment. The interdependence between human rights and the environment underscores the significance of a pristine and sustainable environment for the full realization of a broad spectrum of human rights, including but not limited to the rights to life, health, food, water, and development. The escalating global temperatures have engendered adverse consequences such as water scarcity and land degradation, encompassing soil erosion, deforestation, forest fires, and permafrost thawing. These ramifications impinge upon the rights to life, health, food, water, and an adequate standard of living, among others.

The World Health Organization (WHO, 2021) reports that “in 2021 alone, more than 38 million people experienced displacement as a direct consequence of climate-related disasters”. This displacement directly jeopardizes the enjoyment of fundamental rights such as adequate housing, education, health, and safety. Regrettably, environmental degradation disproportionately affects marginalized individuals, groups, and communities.

For women and girls, environmental degradation exacerbates existing gender inequalities and discrimination, thereby intensifying gender-based violence and infringing upon their rights to access and utilize land and natural resources. Furthermore, children, due to their underdeveloped physiology and immune systems, bear the brunt of environmental degradation more acutely, experiencing heightened vulnerability to food and water shortages, as well as increased disease transmission.

The Office of the United Nations High Commissioner for Human Rights (OHCHR), the United Nations Environment Programme (UNEP), and the United Nations Development Programme (UNDP) regularly release reports on climate justice and the intricate nexus between climate change and human rights. Notably, a significant stride was taken in addressing climate change. The United Nations General Assembly Resolution 76/300, dated 28 July 2022, marked the first instance where a clean, healthy, and sustainable environment was officially recognized as a human right. The resolution encompasses the following elements:

“(1) acknowledgment of the right to a clean, healthy, and sustainable environment as a human right, (2) recognition of the interconnectedness of the right to a clean, healthy, and sustainable environment with other rights and existing international law, (3) reiteration that promoting the human right to a clean, healthy, and sustainable environment necessitates the full implementation of multilateral environmental agreements in alignment with the principles of international environmental law, and (4) urging states, international organizations, businesses, and other relevant stakeholders to adopt policies fostering international cooperation, enhancing capacity building, and facilitating the sharing of best practices to intensify efforts aimed at ensuring a clean, healthy, and sustainable environment” (UN General Assembly, 2022).

This example illustrates a momentous change by the United Nations in assessing climate change through the lens of human rights and spearheading a transformation in the adopted values. This shift is notable as “climate change was initially appraised from the perspective of human security rather than inter-state security risks, which had only begun to receive attention within the international community” (Bodansky,2017). Consequently, it is for states to endorse this decision.

Climate change impacts diverse domains of international law. The escalating temperatures and ocean acidification imperil the marine environment, particularly coral reefs, thereby elevating the significance of maritime law. Furthermore, sea-level rise is poised to redefine the baselines employed for measuring states' maritime territories, leading to the submersion of certain island states.

Moreover, rising sea levels and extreme weather events possess the potential to displace populations within and beyond national borders. To address this concern, the United Nations High Commissioner for Refugees, the International Organization for Migration, and other entities undertake policy, research, and operational initiatives aimed at mitigating forced migration, assisting affected populations, and facilitating orderly migration. However, prevailing international legal frameworks are ill-equipped to cope with large-scale movements of people attributable to climate change and other factors.

Climate change is anticipated to exert a severe toll on biodiversity and fragile ecosystems, thereby engendering far-reaching implications for various multilateral environmental regimes, including the Convention on Biological Diversity, the Ramsar Convention on Wetlands, and the World Heritage Convention.

On the other hand, climate migration represents a prominent predicament arising from climate change, warranting attention in terms of human rights under international law. The absence of a clear international legal framework to address the plight of individuals displaced by climate change has prompted experts from diverse sectors to advocate for a new international instrument that safeguards climate refugees. Nevertheless, the current challenge lies in the lack of political will among states to engage in negotiations concerning a new instrument that would necessitate providing international protection to additional groups of people.

"UNHCR concurs with the general consensus that in the prevailing context, crafting a new binding international instrument pertaining to the rights of such individuals will be a formidable undertaking. This challenge is partly attributable to the largely divergent interests among potential countries of origin and destination regarding such movements. While the former are likely to advocate for maximal admission rights and status, the latter, with their restrictive attitudes towards refugees and asylum seekers, are unlikely to assume more than minimal obligations" (McAdam, 2012).

The persistence of implementation challenges and the absence of durable solutions regarding the traditional refugee problem predominantly stem from a dearth of political will rather than a deficiency in legal frameworks. Despite 148 states being parties to the Refugee Convention or its Protocol, an array of soft law on refugees, and the prominent presence and influence of the United Nations High Commissioner for Refugees, the issue of displacement affecting millions remains unresolved. Consequently, even if a document is adopted, certain states may refuse to ratify it.

Climate change engenders universal consequences, yet the attainment of a solution necessitates a collective will. The guiding principles and agreements serve as a compass for addressing this global challenge.

6.2.6 Climate Change Adaptation : Legal Frameworks and Implemantation Challenges

While the process of recognizing climate change as a security problem continues, increasing adaptation efforts play a crucial role. The current climate change we are facing is predominantly caused by human activities, which is one of the reasons it is considered a security issue. Effectively addressing this issue requires knowledge, planning, coordination, and foresight, involving multiple factors such as political will and influential companies alongside states.

The Paris Agreement, the most recent international legal framework, emphasizes two key aspects in combating climate change. First, it calls for a substantial reduction in greenhouse gas emissions (mitigation). Second, it emphasizes the importance of investing in climate resilience (adaptation). It is important to understand that climate change, like classical security, is intertwined with economics and cannot be separated from policy considerations.

The Intergovernmental Panel on Climate Change (IPCC) defines “Adaptation as the process of adjusting human systems to the current or expected climate and its impacts, aiming to mitigate harm or take advantage of beneficial opportunities” (IPCC, 2012). In natural systems, adaptation refers to the process of adjusting to the actual climate and its impacts, while human intervention can facilitate adaptation to the expected climate. Examples of adaptation measures include implementing large-scale infrastructure changes, such as constructing defensive structures to safeguard against sea-level rise, as well as adopting behavioral changes to reduce food waste.

The IPCC also defines “Resilience as the ability of a system and its components to anticipate, absorb, accommodate, or recover from the impacts of a hazardous event in a timely and efficient manner. This involves ensuring the protection, restoration, or enhancement of basic structures” (IPCC, 2012). In the context of climate change, “increasing resilience can be achieved through various means, such as expanding the use of renewable energies, developing cleaner transportation systems, enhancing carbon sequestration, or expanding forest areas” (EEA,2023). In essence, mitigation and resilience are human interventions aimed at reducing greenhouse gas emissions sources and/or enhancing sinks.

Although there are subtle differences between adaptation and climate resilience, the terms are often used interchangeably. Experts confirm that effective adaptation measures can significantly reduce climate risks. However, they also acknowledge the challenges associated with implementing effective adaptation strategies, the need for a comprehensive approach to climate resilience across the entire economy, and the importance of public policies in facilitating robust adaptation behavior.

Climate conditions have historically been considered in economic decisions, particularly in relation to agriculture and coastal infrastructure design. However, the impacts of climate change extend to all fields of study, from political science to psychology, affecting individuals and states alike. Climate statistics are subject to constant and largely unpredictable changes, highlighting the critical need for tools to address this uncertainty as a key aspect of adaptation policies.

Particularly concerning is the ability of low-income countries and vulnerable populations to adapt effectively. Consequently, climate change negotiations have categorized countries into Annex I and Annex II based on their development levels, as

seen in the Kyoto Protocol, and discussions have taken place to enhance their adaptation capabilities through financial support. In the context of the Paris Agreement, there are essentially no two distinctions, as each state is called upon to contribute to the solution according to its own capacity, given the expanding nature of the problem.

Experts (Fankhauser, 2017) recommend three policy approaches to enhance adaptation efforts. Firstly, "governments should create a policy environment conducive to effective private adaptation by promoting appropriate actions and eliminating potential distortions. This involves adaptation planning, capacity building, and the formulation of low-carbon policies". Secondly, "governments should provide climate-resilient public goods. This includes ensuring that traditional public goods like transportation networks are resilient to climate impacts and developing specific public goods tailored for adaptation, such as flood defenses and climate information services for early warning systems. Coastal protection against sea-level rise is a well-studied example of a public adaptation good, as it offers relatively predictable costs and benefits, especially when considering hard measures like sea walls. The cost-benefit analyses of sea defenses have been conducted since the mid-1990s". Thirdly, "public policies should prioritize assistance to vulnerable groups that lack the capacity to adapt adequately on their own. This assistance can take the form of capacity building, technical support, and response plans".

In conclusion, the vulnerability or endangerment of ecosystems, food resources, and sustainable development depends on both the exposure to climate changes and the adaptive capacity of affected systems. To effectively manage climate change risks, it is necessary to develop and evaluate planned adaptation initiatives. Variability and extreme events, rather than changing average conditions, are key considerations for climate change vulnerability and adaptation. Autonomous and reactive adaptation processes occur in unmanaged natural systems, where species and ecosystems respond to changing conditions.

In human systems, adaptation is undertaken by decision-makers, public institutions, or governments. Building adaptive capacity reduces the security challenges posed by climate change and supports sustainable development. Notably, climate change

adaptation efforts significantly reduce the negative impacts of climate change while maximizing the beneficial outcomes.

7. CONCLUSION

The securitization of the climate crisis arises from the imperative to broaden the scope of security threats beyond conventional military and political realms. To pursue a more comprehensive security agenda, careful consideration of the concept of security is required, encompassing diverse dynamics, including those pertaining to military-political interactions. Since the conclusion of the Cold War, security concerns have increasingly centered on the consequences of an open international system, driven by novel strategies and approaches that prioritize the well-being of individuals over the interests of the state. This shift has substantially influenced our understanding of security dynamics.

Scientific research has robustly demonstrated the anthropogenic origins of the climate crisis, solidifying the consensus that it represents a genuine security issue. International actors assuming the role of international peacekeepers have issued definitive declarations affirming the climate crisis as a matter of security concern, rooted in the framework of law. Comprehensive and consistent scientific studies are being conducted across various scales, ranging from localized assessments to global investigations, to ensure the avoidance of inconsistent analyses. The discourse and language techniques employed to raise awareness of the climate crisis have expanded the agenda from indigenous communities to encompass international organizations.

By adopting the securitization perspective within climate crisis research, scholars have developed a systematic methodology that enables the tracking of a wide array of interconnected issues. The incorporation of sectoral approaches within the domain of security has facilitated the seamless integration of insights from traditional and contemporary paradigms. However, challenges arise in the securitization process due to the tension between the United Nations' recent strategy emphasizing individual security and the traditional notion of security. The amalgamation of human rights

principles with international law has broadened the scope of international environmental law, enhancing its relevance to the climate crisis.

Fostering local acceptance of the climate crisis as a security issue is a crucial step towards the completion of securitization. Encouraging progress is being made with the establishment of ambitious Carbon Zero Targets and states increasingly embracing extraordinary actions to combat the crisis. Resource allocations and the validity and enforceability of measures are continuously being augmented in alignment with international agreements and legal instruments. This comprehensive analysis underscores the imperative to extend security considerations beyond traditional domains, acknowledging the complex interplay between the climate crisis and the functioning of the global community.

Political will, particularly through national policies, is crucial to mobilize resources, address the climate crisis, and promote action. Policymakers play a vital role in creating an enabling environment for climate change action and promoting multi-stakeholder engagement as a collective response. Effective securitization efforts are influenced by political leadership, as leaders who prioritize addressing the climate crisis can mobilize support, guide policy implementation, and encourage international cooperation. Establishing a transparent and accountable governance structure is essential for monitoring, evaluating, and determining securitization efforts.

Consistent, accurate information and knowledge exchange are essential for securitization. Providing policymakers with robust scientific information strengthens the rationale for securitizing the climate crisis, highlighting potential security risks associated with climate change, such as resource scarcity, displacement, conflict, and geopolitical tensions. However, it is necessary to ensure that the complexity of security and the climate crisis is fully understood, avoiding oversimplification or neglecting other important considerations.

Public engagement plays a crucial role in contributing to security by raising awareness of the security implications of the climate crisis. Viewing climate change as a security concern allows climate advocates to rally public support and mobilize political will for urgent action. However, it is important to ensure that security does not overshadow other vital aspects of the climate crisis, such as environmental sustainability and social justice, which security-oriented approaches may overlook.

Balancing economic benefits with security objectives, such as reducing greenhouse gas emissions and improving energy security, involves setting carbon emission pricing and providing financial incentives for clean technologies. While market mechanisms are important, they may not be sufficient to address the complex and interconnected security dimensions of the climate crisis. Additional regulation and policy interventions should be pursued based on reports for policymakers.

International cooperation is essential for effective securitization. A collaborative approach enhances securitization effectiveness by facilitating shared responsibility, shared knowledge, and coordinated action on a global scale. It also enables collective responses to cross-border security challenges, such as climate change-induced migration and resource conflicts. To avoid geopolitical tensions and rivalries, it is crucial to strike a balance between cooperation, fairness, and respect for different interests and priorities.

In conclusion, this comprehensive analysis sheds light on the evolving landscape of securitization in the context of the climate crisis. By employing securitization theory and examining the various dimensions of the climate crisis, this study contributes to a deeper understanding of its urgency as a security imperative. It paves the way for concerted global efforts to mitigate its far-reaching impacts.

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