Integral Research (Peer-reviewed, Open Access & Indexed Multidisciplinary Journal) ISSN: 3048-5991
Journal home page: https://integralresearch.in/, Vol. 02, No. 02, February. 2025

Inhabiting Position of Mainstream and Alternative Theories in Global Environmental Politics

Modupe Albert *
Ph.D.
Department of Politics & International Relations
Faculty of Management & Social Science
Lead City University, Ibadan, Nigeria.

Abstract

Global environmental politics (GEP) is a field of study that combines environmental policies and politics with their real-world implementation. While the traditional view of politics typically centers on the actions of governments and established political figures, non-traditional participants like civil society organizations that are often organized online are becoming increasingly significant in environmental politics across all levels. This paper posits that the contemporary view of GEP dwells so much on theoretical research to the determent of examining the practical application of the field: inquiries into GEP often intersect with practice and crucially can inform those in the field; scholars in this field have the option of applying their knowledge to engage in advocacy, enter the business sector, or hold positions in government. This paper explores an historical perspective GEP as a field of study, illustrating its transition from being largely about international environmental collaboration to a more interdisciplinary approach that encompasses a myriad of environment-related political and policy activities without losing its focus on international relations. This evolution is demonstrated through an extensive literature review. The paper assesses and critiques all significant theoretical frameworks as well as several lesser-known theoretical approaches employed to study and understand GEP. The focus is placed on prominent theories such as realism and rationalism, which may not consistently align with realistic or rational perspectives. These theories have been widely adopted by both scholars and practitioners to explain the international dynamics surrounding environmental issues. Additionally, the paper examines alternative theories that challenge traditional views, including constructivism and Marxism. These opposing perspectives often aim to highlight that ideas can hold as much importance in GEP as the actions of actual states.

Keywords: Global Politics, Environment, Global Environmental Politics, International Relations, Mainstream Theories, Alternative Theories.

* Corresponding Author: Modupe Albert
Email: albert.modupe@lcu.edu.ng
Received 04 Feb. 2025; Accepted 21 Feb. 2025. Available online: 28 Feb. 2025.
Published by SAFE. (Society for Academic Facilitation and Extension)
This work is licensed under a Creative Commons Attribution-NonCommercial 4.0 International License

Introduction

International Relations (IR) as a field of study was established in the years directly following World War I. This history clarifies why topics like security and conflict are so central to international relations (IR) research throughout the early and modern eras, despite the fact that IR is often characterized by the "anarchic" structure of sovereign nations. Environmental concerns were thus not central in IR research even though environmental issues are global issues that have cross-border implications (Stevis, 2024). The context of international relations was influenced by the natural environment, rather than its specific topics. The United Nations Conference on the Human Environment held in Stockholm in 1972 contributed to a paradigm shift. The conference was a global response to various environmental disasters and heightened general consciousness of environmental-related challenges like air pollution, which required international collaborations to solve, "green" politics began to emerge in cultures within the developed world. Scholars of international relations (IR) likely felt compelled to accommodate these new challenges within established theoretical frameworks and to apply the same analytical methods previously used to analyze cooperation pertaining to global economic management or arms control negotiations during the Cold War. One could argue that this approach was flawed and that adopting a more revolutionary stance that prioritized ecology or even green political theory would have been more appropriate. For instance, researchers have explored the long-term linkage in the evolution of physical and socio/international systems.

Research from several fields such as international relations, comparative politics, economics, and even, sciece, is increasingly integrated into the examination of global environmental politics (GEP). This interdisciplinary viewpoint complicates the delineation of distinct boundaries within this vast and varied study domain. This article will offer a concise examination of the emergence of GEP as a distinct domain within international relations as early as the 1980s. Environmental studies have been integrated into several subfields of international relations. By the mid-eighteenth century, researchers started their examination of the effects of natural resources and human population dynamics on political economy and international security. By the early 20th century, states had been prioritizing concerns pertaining to the protection of fisheries, avifauna, and endangered species, as well as challenges linked to environmental degradation and all kinds of pollution. Nevertheless, environmental issues were mostly perceived as a local or, at the highest, a national concern instead of a significant worldwide challenge.

Studies focusing on the nature of GEP are comparatively recent within the wider context of international relations. Research with emphasis on human interactions with the natural environment actually emerged around the 1970s. Yet, GEP was not recognised as an independent field of study until the 1980s and early 1990s. The eventual recognition paved the way for various distinguishing features such as its own academic journals and publishers. In the course of this period, researchers broadened their scope to thoroughly examine many local, national, and worldwide environmental issues, particularly those issues that has to do with global warming and climate.

The examination of global environmental concerns necessitates diverse theoretical frameworks and analytical instruments because of their distinct complexities. These difficulties sometimes include significant scientific ambiguity and intricacy, leading to intense investigation into the relationship between science and policy. Numerous governance challenges stem from the extended timelines linked to environmental concerns and the efforts to resolve them. Although addressing environmental issues may necessitate decades, politicians and their voters often concentrate on election cycles ranging from two to six years. Moreover, as environmental concerns sometimes transcend national boundaries, they present challenges to international collaboration. Consequently, there is an increasing corpus of work focusing the environment and global environmental governance. Scholars have explored GPE through the perspectives of all paradigms in international relations and have utilized diverse academic disciplines, given the potential for substantial economic, social, political, and environmental disruption arising from global environmental challenges and the policies designed to mitigate them. Numerous philosophical and normative works have been produced as a result of discussions on distributive justice and ethics that have been ignited by attempts to address the effects of environmental problems.

Consequently, GEP as a field of study has become incredibly diverse and intricate. The evolution of GEP scholarship and the genesis of diversification into various areas if interest are discussed in the following section. Recently, scholars such as Betsill et al. (2024), Dauvergne (2023), Mitchell (2020b), and Stevis (2018) have offered summaries of the emergence of GEP that enrich and complement the insights provided. Furthermore, this paper will investigate the interaction between the theory of international relations and GEP. International relations theory is a broad, diverse, and inclusive domain which is accommodating to new lines of inquiry such as GEP. The interpretations of Martin Wight (1999), a notable figure associated with the "English School" of international relations theory, provide a framework for categorizing its

traditions. He divided the three "Rs" into three distinct groups: rationalism, revolutionism, and realism. Realism, which was the dominant theoretical framework during that time, is widely acknowledged for highlighting the power dynamics among states in anarchic and inherently violent systems. The rationalist tradition on the other hand, referred to a reformist and liberal tradition rooted in reason. This category encompasses liberals, internationalists, and "idealists"; the latter term was introduced by opponents of realism and has remained notably accurate. Liberal institutionalism constitutes the predominant paradigm in international environmental politics and will serve as the central focus of this discourse. The third category includes those who want to theoretically critique the current global system in the hopes of bringing about its eventual change. This cohort comprises prominent academics who have formulated an alternative to the liberal mainstream while functioning within a Marxist paradigm. While the categories frequently intersect and interrelate within scholarly discourse, there are also notable differences that will be examined in the subsequent sections.

The initial component pertains to the ontological foundation of a theory, or what is considered as being real. For theorists, the fundamental reality may pertain to the dynamics of state or global class relations, for example. Furthermore, we may pose epistemological inquiries regarding how various theoretical frameworks assert their capacity to comprehend actuality. A significant divide exists between social scientists who employ objective factual evidence to identify patterns and elucidate distinctions, and those, such as social constructivism and the English School, who prioritize understanding above "positivistic" explanation. This dichotomy is frequently delineated in discourses on International Relations theory as "positivists" or "rationalists" contrasted with "reflectivists." A number of "reflectivist" perspectives have been critical of positivistic international relations since the 1960s. These include "critical theory," "post-structuralism," and structuralist ideologies inspired by Marxist theory. Additionally, the original English School's animosity against the behavioral approach that is common in US studies has been a factor. Notwithstanding this, positivistic International Relations continues to be the prevailing methodology, particularly in the United States.

Certain normative inquiries pertain to the aims of theory. IR studies generally pursue goals that extend outside the modest pursuit of impartial inquiry. International cooperation has often been point of focus for scholars studying international environmental politics as they seek to manage or resolve issues. For these researchers, the ultimate measure of success lies in whether the institutional or other frameworks established enhance environmental quality or mitigate degradation. This was the stated aim of various research initiatives, as well as the United

Nation's Conference of i992 where the assembly called for "a world system of governance" and discussed the "inescapable" necessity for international cooperation before more contemporary dialogues on the matter (Maurice Strong cited in Haas et al., 2001, p. 6). Thus, the challenge was framed beyond academic institutions and morphed into the well-known question, "Can a highly fragmented and often conflictual political system composed of over 170 sovereign states and various other actors achieve the extraordinary levels of cooperation and policy coordination essential for tackling environmental challenges on a global scale?" (Kingsbury & Hurrell, 2020, p. 1). However, IR theorists do not universally share this fixation.

This paper also explores a broad array of theoretical perspectives that scholars employ when analyzing global environmental politics. These scholars are fundamentally united by their dissatisfaction with how conventional international relations (IR) theories have approached this issue. Traditionally, IR has approached environmental concerns using the same points-of-view, theories, and methods that are being adopted in other topics in international politics, as noted by Hovden (2007) and others. Many in the realm of global environmental politics have neglected to consider that the distinct nature of these issues may necessitate a reevaluation of these methods. This paper provides a review of attempts to diverge from conventional paths and understand global environmental politics. The dissatisfaction of these researchers stems from meta-theoretical issues related to ontology and epistemology.

Quite a few people think that conventional wisdom in the field of international relations (IR) is deficient in its ontological assumptions., resulting in inadequate grasp of the origins of environmental issues and their solutions. Ontology, the theory of being, explores the nature of the universe, including its essential principles, limitations, and components. The rationalist ontology that underpins classical international relations posits that states are unitary rational actors that interact to enhance their relative or absolute power through meticulous cost-benefit analyses. When one actor holds the capacity to influence another to act contrary to their initial intentions, that actor is characterized as possessing power in a purely material and coercive context. The concepts presented in this paper are grounded in various ontologies that recognize the significance of entities beyond states, their socially constructed identities and interests, different modes of dominance and influence, and non-instrumental approaches to rationality.

According to the submission of many experts discussed in this paper, the epistemology guiding orthodox IR pose significant issues that hinder the effort to mitigate environmental degradation. Epistemology, the study of knowledge, examines the feasibility and the credibility of

understanding the world. The positivist epistemology that supports traditional IR mandates that researchers investigate the social realm in a manner akin to the natural sciences, aiming to establish universal regulations by categorizing patterns of correlation among events that can be primarily observed. Such overarching principles can then be utilized to forecast social realities (Blaikie, 2001, pp. 6–7). The methodologies employed in this paper typically focus on the influence of discourse, patriarchy, norms, and dominance—elements that are contextual and often unobservable. It is impossible to formulate universal laws and predictions since they do not manifest uniformly across all contexts and geographies. However, this does not diminish the relevance of these concepts in enhancing our understanding of international environmental politics.

The positivist concept of separating values from facts presents another challenge for investigating environmental politics. This positivist assumption suggests that scholars should strive for neutrality and objectivity, minimizing the risk that their personal convictions might influence their evaluations of reality. Hovden (2007, p. 59) argues that this separation is problematic because positivist social science research "provides little or no room for social critique, and by insisting on a distinction between facts and values, social scientific inquiry...implicitly supports the status quo." The theoretical alternatives explored here address one of these meta-theoretical critiques, even if indirectly, and many diverge from traditional global environmental politics based on both ontological and epistemological grounds.

The Emergence of a Distinct Field of Global Environmental Politics

The 1972 United Nations Stockholm Conference on the Human Environment marked a significant moment in the increasing global focus on environmental issues, paralleling the rise of academic research in global environmental politics. Among the pioneering scholars who authored works specifically addressing global environmental politics are Lynton Caldwell (1980), Harold and Margaret Sprout (1989), and Richard Falk (1979). Although scholarly interest saw a minor decline during the revival of the Cold War in the late 1970s and early 1980s, literature continued to appear throughout this period, including books and sporadic essays in international relations journals (Westing, 1994; Young, 1997). However, as preparations for the 1992 Earth Summit gained traction in international discussions during the early 1990s, academic attention towards global environmental politics intensified significantly.

The emergence of journals dedicated to sharing research on the subject is perhaps the clearest indication of a newly formed academic discipline. While global environmental politics articles

appeared in major international relations journals during the 1970s and 1980, journals and other scholarly works exclusively dedicated to GEP studies only began to appear in the 1990s. The early 1990s saw the founding of many environmental politics periodicals that remain in circulation today. Prominent among them are Global Environmental Change (established in 1990), Environmental Politics (1992), and the Journal of Environment and Development (1992). Another surged in GEP studies was witnessed post-2000, focusing on international law and environmental relations. Journals such as the "International Environmental Agreements: Politics, Law and Economics" (2001) have emerged as a significant platform for varied study concerning GEP and related studies. Another GEP journal, established in 2001 has emerged as a premier publication in the field of environmental study within international relations. Furthermore, other specialist publications were established during this timeframe, like "Environmental Values" (1992), "RECIEL: Review of European Community & International Environmental Law", as well as the "Journal of International Wildlife Law and Policy" (1998).

Furthermore, to promote the dissemination of comprehensive research on international environmental politics, publishing houses such as "Ashgate, MIT Press, Routledge, and State University of New York Press" had also established specialized environment-related series.

The increase in academic courses related to this area further signifies the arrival of a new academic subject. The 1990s witnessed the release of numerous textbooks on global environmental politics, reflecting the subject's rising prominence. Some of the pioneer works on GEP include those by Brenton (2002), and Conca et al. (2003). These textbooks not only highlight the foundational aspects of global environmental politics but also outline various research methodologies. They then delve into multiple case studies concerning global environmental issues and potential political resolutions. More recent works such as Chasek et al. (2018) and DeSombre (2024) have maintained this methodology. Other textbooks, like those by O'Neill (2024), Lipschutz (2022), and Mitchell (2018), take a more theoretical approach and place less emphasis on case studies. This reflects the increasing diversity of scholarship and the move towards a more systematic and theory-based understanding of GEP. These course materials demonstrate the growing complexity of GEP writings.

International Relations (IR) Paradigms and Global Environmental Politics

The GEP literature, upon its emergence as a distinct subject, was closely tied to and shaped by broader conversations in the field of IR. In the 1970s, issues including resource depletion, insecurity, and the world's fast population expansion played a big role. There was much back-

and-forth between neoliberal and neorealist academics in the 1980s and 1990s on whether or not international regimes and institutions might lessen the negative impact of global competition and promote collaboration. GEP thus flourished as a field of study because of the abundance of environmental crises throughout the world, which offered several opportunities to test hypotheses developed from neoliberal and neorealist discourse. These debates inform much of the early work in the field of GEP. This is demonstrated by renowned studies written by authors such as Paterson (2004), Seaver (2005), Haas et al. (2001), and Brenton (2002). Haas et al. also edited a significant volume exploring how international institutions might help promote better global solutions to new environmental problems. One prominent example from this time period that tries to explain environmental politics on a global scale through different international relations perspectives is Paterson's (2002) work.

A key concept in the neorealist framework of international relations is the built-in conflict between self-serving actors within an anarchic state system, characterized by the absence of a higher authority than the state. In contrast, neorealist perspectives on GEP have been significantly less common than neoliberal or constructivist approaches. Scholars within the neorealist tradition generally concentrate on security and environmental problems, particularly those related to resource scarcity (Westing, 1994; Homer-Dixon, 2002; Chalecki, 2018; Deudney, 2015). As more people become interested in the potential effects of environmental politics on global security, the body of literature in this field is expected to rise (Directory of National Intelligence, 2020). In his Project tagged Environmental Change and Acute Conflict, Homer-Dixon argues that environmental scarcity can trigger conflict and predicts an increase in environmental conflicts due to the escalating consequences of climate change. This work greatly influenced the discourse surrounding security and the environment. Research that connects global environmental politics with international security studies is increasingly examining the security risks posed by global environmental issues.

The neorealist framework operates under the assumption that states act rationally to safeguard their core interests, which include economic well-being and national security. Sprinz and Vaahtoranta's (2002) application of an interest-based perspective to GEP is the one most frequently cited example. They propose a methodology that considers both the ecological vulnerability to environmental threats and the costs associated with mitigating those challenges to define national positions in international environmental negotiations. Their argument states that governments are more likely to advocate for international efforts to address environmental issues if there is greater ecological vulnerability and lower costs of mitigation. In contrast,

states are less likely to engage in resolving a global environmental challenge when ecological sensitivity is low and abatement costs are high. Numerous other scholars have also approached global environmental politics through an interest-based lens (Barrett, 2024; Grundig, 2024; Victor, 2024). There is still a lot of literature on GEP that takes an interest-based approach, even though many scholars have pointed out that this way of thinking only gives a partial explanation for the observed behaviours.

Academics began to investigate how international regimes—social frameworks that dictate the expectations and behaviour of actors in specific areas—along with international institutions influenced environmental negotiations and the complex network of environmental agreements that emerged during the 1990s. The neoliberal perspective has had the most substantial impact on research goals within the context of GEP. The concept of "international regimes" gained traction around 1970-80 alongside the growing global attention to environmental issues. Case studies provided by global environmental politics allowed for the testing of theories that arose from the analysis of international regimes (Young, 1985 and Brown et al., 1985). In works such as Young (2002), early investigations into environmental governance became more widely applicable. One of the pivotal contributions that defined this era came from Haas et al. (2001). Theie work emphasized the increasing governmental attention, enhancement of national capabilities, and improvement of the contractual context as key organizational principles in international environmental politics.

The impact of global regimes and organizations on environmental politics and individual environmental habits was the primary focus of the first studies. Additional study focused on determining how successful these regimes were and how the growing network of international environmental groups impacted environmental legislation. Ongoing research regarding governance and the effectiveness of regimes continues to significantly shape global environmental politics. This field of study has been considerably influenced by several large-scale initiatives. The International Regimes Database project provided results on regime effectiveness as reported by Breitmeier et al. (2024). The Institutional Dimensions of Global Environmental Change (IDGEC) project explored the interconnections and effectiveness of global environmental institutions, with findings published by Young et al. (2018). Frank Biermann's Global Governance Project has also published extensively on the topic of environmental governance and its efficacy (Biermann & Pattberg, 2018 and Biermann & Siebenhüner, 2019). Park et al. (2018) undertook critical analysis of modern environmental governance frameworks and propose alternate methods grounded in the idea of sustainability.

Busby (2018) offers a comprehensive examination of the evolution and contemporary discussions within environmental governance literature.

To address aspects of environmental issues that are complex, several scholars in GEP have recently adopted constructivism as they focused on the interests of international institutions. Constructivism highlights the significance of ideas in shaping IR discourses, particularly emphasizing those discourses regarding global actors and their identities as well as their interactions with one another. The fundamental concern of constructivists is how reality is constructed by society. Constructivists have come to be viewed as challengers to dominant theoretical frameworks that emphasize the importance of international institutions and state power in shaping international relations. To better understand how science contributes to the social production of knowledge and how this in turn influences policy, constructivist methods have found extensive use in the field of global environmental politics. (Haas, 2022; Jasonoff & Martello, 2022).

Within the constructivist paradigm, researchers often classify their inquiries into discursive strategies, which concentrate on the role of language and its implications for political action, and norm-oriented approaches that highlight social standards for acceptable behavior. Among the first academics to highlight the role of speech in environmental problem framing and solution suggestion was Hajer (2003). A contemporary perspective on discourse analysis is provided by Dry (2023). Epstein (2018) employs discourse analysis to explore how interests and power dynamics are shaped, particularly in the context of whaling. Litfin (2006) encompasses a variety of researchers trained in constructivism, concentrating on the evolution of sovereignty and the changing standards and discourses regarding the interplay between sovereignty and international environmental politics. Bernstein (2019) and Cass (2024) investigate the progression of international norms, the convergence of liberal economic and environmental norms, and how this intersection has influenced global environmental policy in the context of norms literature. Pettenger (2017) presents perspectives from various constructivist scholars, ranging from those who analyze political responses to climate change through discursive frameworks to those who adopt functionalist, norm-based analyses at the international level.

The field of global environmental politics has been significantly shaped by the neoliberal viewpoint, yet it remains a vibrant domain for paradigm debates. Researchers continue to adopt a several theories drawn from different fields in the examination of GEP.

Bridging the International/Domestic Divide

The literature on GEP is made even more complex by the necessity to integrate comparative politics, which examines domestic political processes, with international relations, which has mostly relied on international relations frameworks to evaluate state conduct. Substantial amendments to domestic rules concerning economically significant and politically sensitive policy domains are necessary for tackling most environmental issues. Sectors such as industrial, transportation, and energy generation must undertake costly modifications to alleviate acid rain. These modifications are intrinsically contentious and tightly linked to the domestic political customs, procedures, and history of the nation's participating in international dialogues.

GEP researchers have constantly endeavoured to connect domestic and international domains to examine the factors that influence countries' positions in global environmental discussions. Harris (2019) conducted a comprehensive analysis of the literature about foreign policies affecting the environment and its connections to GEP. Upon classifying the theories that elucidate the stances of nations in international environmental talks, he gives many case studies illustrating how diverse theories, functioning at varying analytical levels, may elucidate national conduct in these deliberations. Numerous authorities have offered case studies on domestic responses to international environmental crises. The numerous case studies presented by Schreurs and Economy (2005) examine the internal elements that impact the attitudes of different nations about climate change, ozone depletion, and biodiversity loss. Environmental protection activities are becoming more globalized, according to them, and this is changing how domestic policies are made, what policies are implemented, and how effective they are. Consequently, an interacting dynamic arises to ensure that local and global strategies for addressing environmental concerns mutually influence one another. DeSombre (2018) contends that the internationalization of domestic regulations aimed at reducing adjustment costs and bolstering the competitiveness of local industries substantially impacts national stances in international negotiations, indicating that domestic politics are increasingly influenced by international factors. The causal chain originates with national politics and extends to global diplomacy. Harr's Project on Environmental Change and Foreign Policy has yielded many edited volumes (Harr, 2017, 2019, among others) that analyze the internal causes influencing foreign policy viewpoints related to the environment. Harrison and Sundstrom (2018) present a collection of essays on the comparative politics of climate policy.

Nevertheless, despite various initiatives, the systematic links between GEP and comparative environmental politics remain inadequately explored. This therefore constitutes a crucial research subject that might significantly improve our comprehension of GEP.

The Role of Science in Global Environmental Politics

The causes and possible solutions to environmental challenges are sometimes shrouded in mystery due to the complexity of these problems. For this reason, solving global environmental problems requires policymakers to incorporate scientific findings. It is therefore hardly surprising that scholars have thoroughly examined these topics. The circumstances in which scientific evidence is involved in decision-making have been the subject of a great deal of research (Harrison & Bryner, 2022; Bocking, 2022; Dimitrov, 2024; Mitchell et al., 2024).

Policy and scientific analysis are not a new phenomenon. Regarding the incorporation of research into decision making, Haas et al. (1985) offer an early critique. During the 1990s, when people were thinking about science's place in society, the idea of epistemic communities—groups of people who have a common knowledge of environmental problems and how to solve them and who share similar values—was quite important (Haas 1998). In contexts where there is a lot of scientific ambiguity, these organizations can have a big impact on how environmental concerns are framed and the solutions that are proposed. One recurring element is the way scientists are shown to be involved in the world of environmental policy. Rather than being objective providers of data that policymakers may use, scientists, according to Boehmer-Christiansen (2003), are political actors who try to influence how their findings are interpreted and made public.

International Environmental Negotiation

Researchers have focused on the distinctive characteristics of global environmental challenges and the obstacles they provide in identifying successful collaborative solutions, as the frequency and scope of global environmental dialogues have expanded. Currently, there are about 1,500 bilateral and more than 1,000 multilateral environmental agreements in existence (Mitchell, 2020). As a result, a significant data set of negotiations is available for examination. Numerous researchers have examined these debates, contending that a crucial element affecting the ultimate accords is the negotiating process itself. International environmental negotiations are unique from other types of international issues, and Susskind (2002) analyzed these distinctions and similarities. Similarly, Chasek (2019) examines three decades of

worldwide environmental discourse to discern trends in the consequences. She asserts that the international environmental negotiating process may be delineated into six distinct stages and five crucial turning moments. The complex nature of negotiations influences the sorts of agreements attainable and their probability of success. Barrett (2024), Kütting (2018), Susskind et al. (2020), and Bodansky (2019) are among the scholars who have investigated and suggested improvements to international environmental agreements.

The examination of GEP has contested the historical focus on the responsibilities of nations and maybe international organizations. This assertion can be deduced from previous discussion addressing constructivism, scientific contributions, and the impact of subnational entities on national negotiating stances. Research on entities other than states is growing to encompass local governments, indigenous communities, regional alliances, and NGOs, among others. Throughout this research, non-state actors are often shown as gradually shaping national positions and exerting direct influence on global discourses. Princen and Finger (2002) offer an early assessment of the functions of environmental NGOs within the context of international environmental politics. They contend that NGOs influence national and international perspectives on environmental issues and potential policy responses through their dual roles as autonomous organizations and facilitators of social learning, therefore engaging in a double-edged sword in global discussions. In their presentation of a method for assessing the impact of NGOs on environmental concerns during global negotiations, Betsill and Corell (2018) draw on a substantial body of case studies. By analyzing the global effect of corporate interests on environmental politics, Levy and Newell's 2023 study demonstrates the interdependence of global environmental regulations and business practices.

The literature on international environmental negotiations is abundant with case studies and comprehensive evaluations of the negotiation processes, emphasizing the significance of many players and components. To improve the chances of reaching effective agreements, the literature offers suggestions for making the bargaining climate more conducive.

Methodological Approaches to Studying Global Environmental Politics

Because GEP was just starting off, a lot of the early research relied on individual case studies. Because there was so little written about the new field, many researchers were quick to jump on the chance to apply their ideas and analytical tools.. Mitchell (2018, p. 7) discusses the challenges that arose during the initial phases of academic inquiry:

> At first, deductive theories produced minimal follow-up regarding operationalization and testing, whereas inductive case studies provided valuable insights that were often not framed in a manner that would aid their application and assessment in other environmental contexts. Consequently, various terminologies and taxonomies of causal factors frequently overlapped with, yet appeared unaware of, rival or complementary frameworks.

As new environmental issues have made their way into the global agenda, the selected case studies demonstrated how scholars have routinely developed extensive literature in response. When GEP first began, acid rain and fluxes of transboundary air pollution were two of the main concerns (McCormick 1993). Climate change, regional water pollution, and ozone depletion were also investigated by researchers (Paterson, 2004; O'Riordan and Jäger, 2004; Luterbacher & Sprinz, 2019; Haas, 1998; Litfin, 2002; Rowlands, 2003; Seaver, 2005; Benedick, 2006). The results from specific case studies could not be generalized to other situations, even while they offered a plethora of fresh insights into environmental politics on a global scale. When examining environmental politics on a global scale, each study took a somewhat different theoretical approach.

The goal of researchers, as this field's corpus of work expanded, was to evaluate the generalizability of prior research by applying a consistent theoretical framework to a variety of case studies. The characteristics of typical pool resource problems and ways to address them were examined by Barkin and Shambaugh (2007) through the analysis of several case studies. worldwide organizations' potential to foster worldwide collaboration on environmental concerns was investigated by DeSombre (2023) and Haas et al. (2001).

Academics have a plethora of case studies to draw from in their systematic investigation of GEP, thanks to international debates on a variety of situations during the last forty years. In order to put the theories that have emerged from prior case study investigations to the test, quantitative evaluations are becoming more popular in the field of GEP. A number of notable initiatives have used quantitative research methods to test various theories on international environmental politics; examples include Mitchell (2020a), Young et al. (2018), Breitmeier et al. (2024), and Miles et al. (2012). Researchers interested in environmental politics on a global scale still have access to a wealth of methodological options.

Environmental Ethics and Justice

There has been a deluge of writing on environmental justice and ethics in the last several decades. Many complex ethical and legal questions arise in the context of global environmental

crises. Many questions have been raised. “What are the duties of the well-off toward the poor in today's society?” Many people throughout the world are poor, while the rich use up all the planet's energy and resources. “Is there a moral obligation for the well-off to protect Earth's natural riches so that the poor might enjoy them?” “Is it critical for wealthy countries to help poor countries deal with the environmental problems caused by resource extraction?” Discussions surrounding these topics often fall under the rubric of "environmental justice." When it comes to ecological and environmental justice, Schlosberg's (2017) analysis of the concept of "justice" is quite interesting. He proposes ways to incorporate environmental justice into policymaking and explains how the American and worldwide environmental movements view justice differently. For a more basic understanding of where environmental justice studies came from and how they have developed, see Bryner (2018) and Parks and Roberts (2024). They offer a good groundwork for further research on the subject and give comprehensive bibliographies for further reading. Environmental justice, as presented by Bryner (2018), may be better understood via the lenses of distributive justice, social justice, civil rights, public involvement, and ecological sustainability, among others. Through the perspective of environmental justice, Harr (2019) analyzes U.S. foreign environmental policy and draws a connection between international environmental justice and the current paradigms in international relations.

Numerous researchers have endeavored to investigate issues of intergenerational justice, despite the fact that the aforementioned writers predominantly concentrate on environmental justice within current populations. What obligations does the current generation hold toward future generations? Using the concept of intergenerational justice, Hiskes (2019) asserts that protecting the environment should be a fundamental human right. In their 2019 article, "Intergenerational Environmental Justice Issues," Beckerman and Pasek stress the importance of juggling present obligations with those of future generations and the most vulnerable among us.

There have been heated debates on the moral implications of fighting climate change, in addition to the more general topics of environmental justice. Adger et al. (2024) investigate the challenges of adapting to climate change and fairly distributing adaptation costs. When it comes to climate change, Page (2024) evaluates the importance of intergenerational fairness. While Harr (2019) studies American climate policy and highlights their insufficiency in addressing worldwide equity and environmental justice, Harr (2018) addresses the relevance of global (cosmopolitan) justice in international solutions to climate change.

The reality that individuals responsible for environmental harm often evade the full repercussions of their actions raises significant ethical concerns that must be factored into any international political responses. Nonetheless, there exists the potential for substantial global redistributive effects arising from both the outcomes of environmental issues and the government's response to these challenges. Furthermore, they will have important implications for living standards and overall quality of life. These matters introduce complex considerations of equity, which include justice and fairness between current and future generations. There is an expanding body of literature addressing these topics, making it essential for scholars to continue highlighting them in the context of global agreements aimed at addressing environmental challenges. Many researchers have criticized the lack of adequate integration of ethical considerations into international decision-making processes.

Realism

Although the realism school continues to impact both academic and popular studies in international relations, its effect on international environmental politics is relatively limited. This is partly because it tends to characterize the subject matter of environmental issues in a way that diminishes their significance. Realists categorize environmental concerns as "low politics," believing that the realm of "high politics"—including statecraft, warfare, and peace—should be the main emphasis of international relations. Realists advocate for the primacy of the state, which is viewed as responsible for protecting national interests. Protecting the nation's borders, ensuring its financial stability, and achieving other fundamental goals are all considered matter of highest prirority. This idea of national interest was memorably reduced to the pursuit of power by Hans Morgenthau in 1948. As a result, the natural environment is regarded as significant primarily concerning rivalries between states over resources, rather than for its own sake. Such competition operates within anarchic "self-help" systems where the use of force remains an option. Consequently, realist thinkers focus on balancing power dynamics and establishing some form of order in a conflict-ridden world. Waltz's "structural" theory (1987) led to a notable shift in realist thought. Grounded in a rational choice model of how any state would function in an anarchic environment, neorealism—closely linked to neoliberal theories—sought to provide a concise explanation of international power relations. Efforts to create social scientific and "testable" models of international relations often contained realism and neorealist assumptions (Vasquez, 1991).

Such research rarely considered the environment, yet realism presents one framework that could be relevant for understanding global environmental cooperation. The "hegemonic stability thesis" was developed alongside a significant body of research to elucidate the conditions that can foster international economic cooperation. Realist theories suggested that self-interested nations would adhere to international laws only to the extent that they were enforced by a dominant "hegemon." Throughout much of the 20th century, the United States fulfilled this role, and after its dominance began to decline in the 1970s, concerns arose regarding the future of global economic governance. Due to the USA's withdrawal from its leadership position, as well as its either absence or obstruction during the crucial period of developing international environmental agreements starting in the late 1980s, this thesis appeared less credible, let alone attractive, to those studying international environmental politics. The concept of hegemonic stability is still being explored within the framework of realist thought. The classification of environmental politics as "low politics" has become increasingly untenable, if it ever was. The rise of climate change as a key issue has shown that it is closely aligned with national interests due to its deep connections with energy production and economic growth challenges. According to Rowlands (2019), realist views on shifting power dynamics and earlier traditions in geopolitical research that centered on resource and territorial conflicts remain pertinent. Scholars such as Sir Halford Mackinder positioned geopolitics mainly within political geography, while also possessing strong ties to realist power political theory. While the field of international environmental politics has received more attention since the work of prominent political geographers Harold and Margaret Sprout (1979), the focus has remained on resource disputes rather than environmental issues. Geopolitics has been the precursor to the current focus on environmental conflict and security research, as noted by Stevis (2024, p. 20).

Environmental security has been the subject of a great deal of new study as of late (Swatuk, 2024; Barnett, 2019). Governments and the strategic studies area become interested in environmental security when it is presented in terms of the connection between environmental changes and armed conflict. Organizations such as NATO have provided large funding for research that aim to predict the outcomes of future conflicts (Lietzmann & Vest, 2007). Strategic assessments frequently use the term "threat multiplier" to describe climate change (European Council, 2018). A number of entities, including governments and activists, are working to "securitize" environmental concerns in order to give them more prominence; the military sector is only one of these. According to Buzan et al. (2006), there is a school of

thought in security studies known as the "Copenhagen School" that places an emphasis on how political "speech acts" may make some policies seem more secure by linking them to the powerful idea of security. As a result, campaigns to redirect public resources and investment toward climate change would frame it as a more pressing national security concern than terrorism (King, 2022). The government of the United Kingdom, for example, presented a climate change resolution to the United Nations Security Council in April 2007. Deudney (2015) makes a compelling case that there are considerable constraints to integrating environmental issues with military and strategic matters, but this does not change the fact that it remains true. One reason is that military people and environmental campaigners have very different worldviews, and two, that military spending is more likely to exacerbate environmental problems than to solve them.

Homer-Dixon (1999, 2007) and his associates implemented a considerable research initiative to explore the actual links between environmental deterioration and conflict. They categorized three types of conflicts that could be causally connected to changes in the environment: disputes over limited resources, conflicts arising from migration, and uprisings occurring when weak states struggle to cope with the pressures of environmental shifts. The situation in Darfur, Sudan, exemplifies the interconnectedness of environmental changes (such desertification and habitat degradation), farmer displacement, and ethnically motivated wars. The exact causal pathways, however, are notoriously difficult to discover (Gleditsch, 2006; Barnett, 2019). Pragmatic assumptions about conflict and security form the basis of a substantial portion of the literature on environmental security. As an example, studies examining the potential benefits and drawbacks of several future climate change scenarios have been commissioned by the Pentagon (Schwartz & Randall, 2021). It must be acknowledged, however, that most of the study in this area takes place within the normative framework of peace studies, which presents a conflicting perspective (Baechler, 2007). Due to its pacifist and even radical stance, peace research stands in stark contrast to the realist paradigm in its commitment to social scientific explanations.

Rationalism

A lot of people misunderstand what the word "rationalism" means. Thus, it is important to point out that it has nothing to do with the procedural rationality observed in the rational choice models employed by realists and their opponents. The underlying premise is that rationalists provide a realistic alternative to the extreme idealists who seek to overthrow the existing system

or the ugly realities of power politics. The foundation of the rationalist tradition in international relations is based on ideas that may be traced back to Grotius, the founder of modern international law. Instead of being ensnared in Hobbes's eternal "war of all against all," states might develop common norms and practices that improve their circumstances and safeguard individuals' rights. Classical rationalist scholars mainly focused on the challenges of war; the general perspective recognizes that there is mainline research in international environmental politics that aims to better manage shared issues among states, but it does not assume that there will be a revolutionary change in the international system to provide a sustainable form of global ecological governance soon.

Liberalism and Neoliberalism

Unlike being trapped in an endless Hobbesian conflict characterized by a "war of all against all," nations may work together to establish norms and policies that benefit their citizens and the world at large. Despite the fact that traditional rationalist thinkers mainly dealt with military conflict, this approach acknowledges the existing literature in international environmental politics that seeks to improve states' handling of communal issues, rather than predicting a sudden shift in the international system that would result in sustainable ecological governance on a global scale. In the years between the two world wars, liberal internationalists played a significant role, fighting for national self-determination and, in reaction to a framework of violent international relations, calling for international law and organization. An offshoot of this view, "functionalism," posited that small-scale economic and social partnerships may pave the way for greater international integration and, eventually, the devolution of political power from nation-states. Liberals have always been wary of the state, but they now want a more global and pluralistic global order. Due to this skepticism and a firm belief in the advantages of free trade for fostering prosperity and preserving political stability, liberalism became the prevailing ideology following the Cold War, promoting and defending the growth of economic globalization. Environmental conservation was not a significant focus in liberal ideology. In fact, critics argue that liberal economics has contributed greatly to the environmental harm associated with economic growth, as it has fostered the rise of consumer capitalism. Liberals argue that if transactions accurately reflect the environmental repercussions of human activity, or externalities, free markets would distribute resources in the most effective and sustainable manner.

This imbalance, coupled with the state authorities' inability or unwillingness to efficiently coordinate their efforts for the common good in the long term lead to a vital understanding within liberal views regarding global environmental issues. A key source of intellectual motivation for this perspective in international relations stems from a historical concern with regulating the global economy amid governments' counterproductive "neo-mercantilist" actions. Indeed, advocates of liberal political economics recognize that markets cannot operate as intended without a framework of regulations. Hence, it is crucial to motivate governments to collaborate in what they perceived as their primary collective interest, akin to the cooperation seen at the end of World War II when they established the Bretton Woods monetary system and the global free trade framework, which were essential to globalization's advancement. As environmental issues became more prominent in the 1980s, liberal theorists could build on past studies concerning the conditions necessary for global economic cooperation. Some individuals, such as Oran Young, who began exploring global environmental collaboration in the last decade, were notable exceptions. While examining what are known as collective action problems, they adopted numerous principles from neoclassical economics (Keohane, 1992). In fact, distinguishing between research that is mainly economic and that which pertains to international relations can be quite difficult. Economists have extensively analyzed international agreements and the conditions surrounding them, as well as the viability of mechanisms like carbon trading (Barrett, 2021). For example, it was suggested that air quality should be viewed as a global public good, with climate change being described as "the greatest example of market failure we have ever seen" (Stern, 2017, p. 1). Economic theory posits that the market is incapable of providing public goods, which serves as justification for governmental cooperation to ensure their availability. This strategy is predicated on the concept that rational, utility-maximizing individuals would choose to collaborate when incentives are suitably matched. Game theory offers many pertinent models for this negotiation type, notably the "prisoner's dilemma," in which parties must surmount their distrust to get the advantages of cooperation.

This notion was linked to the need to tackle the "free-rider problem," which denotes the issue of individuals reaping advantages from agreements without making any effort to participate. The awareness of this possibility was thought to considerably deter prospective participants in an agreement (Stern, 2017). Researchers emphasizing international collaboration, sometimes referred to as neoliberals, shared a comparable epistemic perspective with mainstream economics. The phrase "neo-neo" refers to the contention between neorealists and their liberal

opponents. The term "neoliberal" is employed to characterize researchers who have embraced several ideas from their economic counterparts, however it presents definitional issues. Neoliberalism often denotes concepts that promote a diminished role of the state, emphasizing individual and private interests above communal ones. This ideology underpinned the policies of the Thatcher administration in the UK and those found globally within the Washington Consensus. While many individuals classified as neoliberals in the international relations literature may contest the political and economic agenda of neoliberalism, there may exist some philosophical parallels between the two variants of neoliberalism.

Understanding the incentives that promoted cooperation among self-interested actors was the primary goal of neoliberal study. When other liberal concerns, such the complex web of international players and transnational linkages, were pushed to the sidelines in favor of studying states, neoliberalism amounted to a reduction in complexity (Mansbach et al., 1984). Whether the advantages gained by state actors were absolute or relative was sometimes said to be the one and only difference between liberals and neorealists, according to the long-standing liberal view (Lamy, 2019, pp. 123-125).

Regimes and Liberal Institutionalism

Stating that liberal institutionalism represents the principal perspective in the analysis of international environmental collaboration is not an exaggeration. Institutionalists recognise that economic operations and international cooperation consistently transpire inside a carefully constructed structure of rules and conventions, notwithstanding the shared economic assumptions previously articulated (Young, 1997). International law and organizational theory have always addressed this issue; however, researchers in international relations (IR) proposed the novel notion of an international regime, primarily in the analysis of international economic governance. Regimes were recognized as institutions within a sociological framework. This idea aimed to investigate the ad hoc pacts that made cooperation possible, such as treaties and international organizations, sometimes called institutions. In contrast to realist methods, regimes were thought to have a special impact on policymaking at the national level. Furthermore, they made it possible for a stateless society to function as "cooperation under anarchy." This is a common topic in discussions about international relations, and it has only become worse due to concerns about the potential breakup of the international monetary system and the anticipated decline in US dominance following the 1971 dollar standard collapse.

Liberal thinkers asserted that collaboration and stability could be attained "after hegemony" (Keohane, 1992).

The examination of regimes was readily modified to explore international environmental collaboration; the formation of international environmental treaties increased significantly with the enactment of the prominent Montreal Protocol in 1987, the Vienna Convention on Stratospheric Ozone Depletion in 1985, and the Long Range Transboundary Air Pollution Convention in 1979. It might be said that although research on regimes from a liberal institutionalist viewpoint originates in other domains, the environmental sector has substantially advanced its evolution (Haas et al., 2001). This methodology is grounded in social science, aiming to discern patterns in empirical data from diverse instances of environmental collaboration (Young & Zurn, 2024), while also seeking to delineate independent and dependent factors and elucidate variances. The establishment of environmental regimes, the degree of consensus, and the degrees of compliance and efficacy have served as the dependent variables for the resolution or mitigation of environmental difficulties.

The earliest examination of environmental regimes focused on a fundamental question akin to one raised by economists: under what conditions may cooperation transpire? (Young, 2005) A range of answers emerged from a comprehensive examination of these conditions. A potential rationale for collaboration may be a shared feeling of vulnerability and an ongoing commitment to agreements that protect access to the global commons. Considering the premise that tiny "clubs" of engaged nations are poised to achieve the greatest advancements, the "geometry" of agreements has emerged as a pivotal concern (Victor, 2019). This notion is substantiated by the sustained effectiveness of the Antarctic Treaty system, characterized by selective membership, and the Montreal Protocol, which necessitated permission from a limited number of chemical manufacturing firms. Oran Young's work (1997 and 2002) has been significant in elucidating the special dynamics of "institutional bargaining" when consensus is essential for establishing a regime. Young posited many hypotheses concerning the prerequisites for success, encompassing the lack of a specified agreement zone and a certain level of uncertainty. One of the other criteria is finding solutions that are perceived as both fair and enforceable. External shocks make success more probable, and entrepreneurial leadership is essential (Young, 2002, pp. 81–116).

Multiple studies have examined successful leadership in literature (Andresen & Agrawala, 2020; Wurzel & Connolly, 2019). Notwithstanding the formation of several global

environmental accords in recent decades, most indications indicate a persistent deterioration of Earth's ecosystems, underscoring the necessity for leadership capable of galvanizing aggressive worldwide initiatives. Underdal's (1988) "law of the least ambitious program" posits that the primary issue for academics of worldwide environmental cooperation lies not in the lack of global accords, but in their propensity to devolve to the lowest common denominator. A new joint research by prominent academics advocates for a "'constitutional moment' in global politics, akin to the significant governance transformation following 1945" (Biermann et al., 2020, p. 7). This plea was issued following the 2012 Rio + 20 Conference, which highlighted the unlikelihood of rapid transformation. In addition to identifying elements that contribute to the establishment of regimes, institutional design is a significant and problem-oriented domain within liberal studies. This pertains to international attorneys and addresses scenarios when "soft law" may be more beneficial than a definitive, legally enforceable contract. The future of the climate change regime is a topic of significant dispute. Relevant research has been undertaken on suitable policy instruments, including carbon trading, which may be classified as "market-based" or "command and control." They can furnish extensive insight regarding the rationales for diverse methodologies within a certain regime (Webster, 2019). Extensive study has concentrated on the efficacy and adherence to international accords. This includes explorations of the meaning and assessment of effectiveness, as well as in-depth case studies of specific regimes (Haas et al., 2001; Victor et al., 2006).

The emphasis on regimes has expanded in several dimensions in recent years. Institutional research has undergone what can be seen as an ambitious rebranding as "global environmental governance" or "earth system governance" (Biermann, 2017). At times, this may only imply a reorganization of pre-existing international organizations in official discussions. Think about the protracted discussion over whether the UN should create a new council to sit alongside the Security and Human Rights Councils or if UEP should be elevated to the status of a specialized agency. However, there has been a change in the focus of academic discussions on global governance. Instead of focusing on states as in previous regime analyses, scholars now recognize the importance of considering various levels of appropriate environmental governance. They also include transnational entities such as NGOs, which have long been a topic of great interest in the field of International Relations (Princen & Finger, 2002; Keck & Sikkink, 2006). On top of that, according to theories of global governance, corporations may one day replace or complement nation-states as the primary governing actors (Pattberg, 2017). This is a reconnection with liberal principles that had been disregarded in favor of

oversimplified theories based on the assumption of rational unitary state agents. Classical liberalism has its normative adherents, who believe in non-governmental organizations (NGOs) as having inherent moral superiority and who fear the state may become "greened" (Vog, 2023). Institutions do not operate alone but rather "interplay" with one another in ways that are crucial to their growth and efficacy, according to a new school of thought in liberal institutionalist research (Oberthür & Gehring, 2024). Both the interoperability and the congruence of various institutions with their respective physical settings have been investigated by Oran Young. 2018).

Variations on the Rationalist Theme: Cognitivism and the English School

Similar to neoclassical economic theory, liberal institutionalist researchers frequently presumed a fixed set of demands instead of examining the internal dynamics of the state. The historical neglect of choice formation has lately been contested by behavioral economics, however it has faced longstanding criticism in international environmental politics. Following the publication of Haas's (1998) work on the Mediterranean pollution regime, there was a distinct shift towards a "cognitivist" view of regimes. The "black box" of national policy positions was opened up through a thorough exploration of the apparent direct link between authoritative research and its influence on policy-making, underscoring the significance of evolving discourses (Litfin, 2002). The impact of "reflectivist" international relations and the rising interest in social constructivism is evident in cognitive perspectives on regime formation (Wendt, 2007). This posed a challenge to the dominant liberal institutionalist perspective by expressly rejecting the rational choice model of human conduct in favor of alternative "logics of appropriateness." Criticism of assumptions regarding objective natural "facts" is also included, as science is perceived as a socially constructed endeavor. While these perspectives can be assimilated into institutionalism, they also raise questions about the reliability of the liberal research currently being disseminated. As social constructs, regimes possess a dynamic, formative, and ideational quality.

Certain variants of constructivism do not inherently clash with the epistemological foundations of social science research and, by extension, with the principles of mainstream liberal institutionalism. Conversely, it seems that both ontology and epistemology align with constructivism, which seeks to understand normative development rather than provide stringent explanations within the study of regimes (Vog, 2021). One of the most debated topics in contemporary international relations theory is the extent to which rational choice and

reflectivist approaches can be seen as complementary (Smith & Owens, 2018). The phrase "rationalist–reflectivist" is sometimes used to refer to this discussion. "Rationalist" pertains to rational decision-making and does not connect to the rationalist category proposed by Wight, which is the focus of this study. The English School characterizes itself as rationalist in its viewpoint on global society. Regarding the establishment and transformation of institutions like diplomacy, sovereignty, and international society (considering the precise meaning of institutions), advocates have adopted stances that somewhat correspond with those of contemporary constructivist theorists. Initially, they embraced a historically informed interpretative methodology, dismissing the epistemological perspective of US "behavioral" International Relations scholarship from the 1960s. Although most proponents of the English School focused on issues pertaining to human rights, international order, and conflict, their apprehensions about the fundamental rules of a global society of states are undoubtedly pertinent to global environmental politics. Falkner's (2020, p. 509) assertion that "the English School offers a rich account of the institutional phenomena that define the durable patterns of and historically bound character of international society, contrasting with both realism and neoliberal institutionalism," indicates that this oversight is now being addressed.

Revolutionism

Martin Wight recognized a revolutionary tradition within international thought alongside realism and rationalism. While certain Marxist and socialist authors in this realm maintained distinct revolutionary objectives, others held less defined aspirations for transforming the interstate framework into a more amicable and peaceful global landscape where individuals and communities could coexist in greater freedom and harmony. A collective repudiation of the status quo and the international framework, seen inevitable by realists and subject to revision by rationalists, is a recurring motif in this book. Sovereign states are generally perceived as exacerbating the issue rather than acting as possible proponents for a more diversified and environmentally conscious global community. Realism and rationalism focus on problem-solving theory, while those advocating for revolutionary change are categorized as "critical theorists" (Cox, 1989).

Marxism was somehow associated with the most notable revolutionaries of the twentieth century. A shared historical materialist perspective among Marxist thinkers saw the state not as an object of study but as "the executive committee of the bourgeoisie," or ruling class. To fully grasp the capitalist mode of production's underlying problems, one must look at them

through the prism of current imperialist wars and international politics more generally. Extensive research on imperialism and worldwide trends of economic underdevelopment was conducted throughout the Cold War. Alternatively, similar to other contemporary schools of thought in international relations, this one largely disregarded environmental concerns until the late 20th century, when scientists began to link globalization, capitalist accumulation, and the degradation of Earth's ecosystems. The global ecological crisis can be better understood through the lens of Marxist analysis, which delves into the dynamic relationship between an ever-changing system of capital accumulation and the economic activities that drive depletion of natural resources, destruction of habitats, and rising pollution levels (Paterson, 2019). Concerning global environmental concerns and the attainment of justice for the oppressed, it poses a direct challenge to liberal, market-oriented orthodoxies.

Marxist structural analysis contests the notion that environmental challenges may be seen solely as collective actions among states within the context of International Relations theory. From this viewpoint, global environmental governance projects and international regimes are considered "epiphenomenal." Although they may fulfill several roles within the global capitalist framework, they do not guarantee a decrease in environmental damage; rather, they embody the system itself. The UN climate regime is ineffective in addressing climate change; it requires fundamental alterations to the capitalist growth model to incentivize global economic decarbonization (Newell & Paterson, 2019). Marxist study frequently embraces a neo-Gramscian perspective. Gramsci's writings elucidate the interaction between the social superstructure and material base in a "hegemonic" process that fosters consent for a prevailing system, even among those whose interests would ordinarily conflict with it, serving as an inspiration (Humphreys, 2004; Kütting, 2022; Levy & Newell, 2023). Laferrière & Stoett (2007), Saurin (2004), and Eckersley (2022) are just a few of the works that have pushed ecological discourse outside of the current international framework and into the realm of green political philosophy.

Constructivism

Constructivism serves as a social theory within international relations that emphasizes the core ideas shaping the behaviors of nations and various actors. Grasping the ontology of this perspective, which is mainly based on the reciprocal construction of structure and agency, is essential for a comprehensive understanding of its distinctiveness. This suggests that while structures can both facilitate and constrain the behaviors of actors, the actions of these actors

also help to reproduce and alter these structures. Concepts regarding norms, culture, and identity are employed to define and assess these structures. Their intersubjectivity is a significant factor that sets these concepts apart; Ruggie (2006) asserts that they rely on shared knowledge supported by "collective intentionality" rather than individual belief. Actors have agency when they can respond to events and make and carry out decisions. Structures are shaped by intersubjective meanings, which in turn influence the players. The British government is a good example. Just having a bunch of individuals show up in Whitehall wouldn't mean much if there weren't social realities like the "sovereign state," "national citizens," "voting," and similar notions that classify them as a single entity. Because of their central role in the process, actors' identities and interests must arise via their engagement with structures, rather than existing independently. Therefore, it is crucial to comprehend the social setting in which one's interests and identities are shaped and modified. Recognizing that intersubjective notions are not static but rather context-dependent is of equal importance. These conceptions change depending on the time, place, and social norms in question. The goal of constructivist research in international relations is to understand and explain how normative frameworks of global governance develop over time and how different states react to these changes.

Katzenstein (2004, p. 5) defines norms as "collective expectations for the proper behavior of actors with a given identity." standards indeed exist, according to rationalists and constructivists, but how people comply with those standards is where they disagree. The differing logics of action presented by March and Olson (2006) encapsulate this distinction. Rationalists propose that norm adherence is driven by the "logic of consequences," suggesting that participating parties evaluate the potential results of various choices and select the option that best promotes their externally determined interests (2006, p. 949). Conversely, constructivists attribute norm adherence to the "logic of appropriateness": "(h)uman actors are conceived as following rules that connect specific identities to particular contexts, approaching individual action opportunities by evaluating similarities between current identities and decision-making scenarios alongside broader notions of self and situation" (2006, p. 951).

A multitude of researchers have examined international environmental politics through the lens of norms that direct governmental activities. After the 1972 Stockholm United Nations Conference on the Human Environment, Bernstein (2019) used a constructivist approach to assess how global environmental governance evolved in the 30 years after the event. The norm-complex of "liberal environmentalism," according to Bernstein, views trade and financial

liberalization as complementary to, if not essential to, global environmental protection. This view was favoured over others that connected environmental degradation to unchecked industrialization and unsustainable economic growth. Furthermore, it advocates that markets and other economic processes are the favoured approaches for environmental management over "command-and-control" systems (Bernstein 2019, p. 7). Bernstein's "socio-evolutionary" hypothesis asserts that the alignment of new norms with the prevailing social structure, referred to as "social fitness," influences the selection of norms (2019, pp. 20–21).

Various academics have examined conflicts about the interpretation of certain norms that delineate accountability and suitable climate change response tactics (Betsill, 2018; Cass, 2024; Eckersley, 2017; Harr, 2018; Hoffmann, 2023; Pettenger, 2017; Steven, 2020). We have mainly been concentrating on the idea of "common but differentiated responsibilities." The premise upon which this guideline is based is that all governments should participate in governance activities aimed at protecting the environment. However, because of their greater financial resources and historical involvement in pollution, industrialized nations mostly bear the responsibility. (Rajamani, 2018) This rule has been developed by the Vienna Convention on the Protection of the Ozone Layer and its Montreal Protocol, the Basel Convention on the Control of Transboundary Movements of Hazardous Waste, and the Conventions on the Law of the Sea. Having said that, the clear criteria it lays forth for determining fault have been a source of contention throughout the past two decades. Negotiators' normative knowledge, which both limits and empowers them, is better understood via a constructivist lens than through a rationalist one, which holds that governments solely act based on value-neutral cost-benefit analyses.

Expanding the research to include additional players in the global framework has theoretical constraints, even if most of the constructivist literature focuses on states. Contrary to liberalism and realism, constructivism is not a theory of international relations but rather a meta-theory. The socialization processes inside the World Bank Group were investigated by Susan Park (2018) using constructivist theory. In an effort to shift the World Bank Group's policies away from a narrow focus on nation-states and toward more environmentally friendly norms, Park investigated the ideological impact of transnational environmental advocacy networks. Park characterized this transformational process as a socialization process, describing it as "an internalization process by which agents absorb the norms that constitute the social structure in which they exist." The ongoing interactions between agents and structures make this process

nonlinear and capable of inducing significant shifts in an organization's identity (Park, 2018, p. 8).

Constructivism challenges the epistemological assumptions of positivism. According to constructivists, it is impossible to have a complete picture of society by looking at objective facts; doing so would be a huge mistake. Additionally, universal principles are only applicable in closed systems that demonstrate consistency and stability, which the social realm does not represent. In contrast, constructivism aligns with an interpretivist approach to epistemology that seeks to "uncover the beliefs or meanings that make actions and practices possible" (Bevir, 2024, p. 283), thereby interpreting the contextual "webs of meaning" that constitute the social world (Neufeld, 2001). Nevertheless, constructivist scholars do not necessarily reject the core idea of fact-value separation espoused by positivism. By its very nature, constructivism does not make normative arguments about how the world should be organized.

To effectively contest prevailing worldviews, constructivist scholars must include normative principles from political theory. Utilizing a "green constructivist" approach, Steven (2020) examines the interactions among state actors, foundational social institutions, and socially created interests and rationalities. The integration of green political theory provides a basis for analyzing modern global climate policy regarding its institutionalization of ecological irrationality. Conversely, several researchers, like as Bernstein, prioritize examination above critique; his objective is to “explore how and why liberal environmentalism was institutionalized...rather than merely analyzing the outcome” (Bernstein, 2019).

Marxism

As pointed out by Peter Newell (2019), experts in global environmental politics frequently fail to acknowledge capitalism's significance. Most experts avoid discussing capitalism even though it is a major factor in climate change and the system that decides what kinds of solutions are acceptable. The reluctance to question an established and seemingly unalterable economic system, according to Newell, is the root cause of this muteness. One possible motivation for this is a want to distance oneself from the failures of socialism in the twentieth century or to become relevant in policymaking. This second line of reasoning is just as flawed as saying that the actions of the Democratic People's Republic of Korea make democracy bad. The previous viewpoint had merit, provided the academic community does not universally embrace this position. Pepper (2001, p. 59) asserts that "one cannot evaluate Marxism, socialism, or any

other ideology solely based on the actions of their proponents," emphasizing the disparity between theory and reality.

Nonetheless, several researchers have included capitalism into their examinations of international environmental politics. This section presents a concise compilation of publications that engage with Marx's theories and critiques of capitalism in many ways. Marxism constitutes a comprehensive tradition that includes several political and philosophical perspectives. At the core of this viewpoint is the notion that the social structures of material production profoundly affect human experience. This organizational strategy is recognized as dynamic and historically contextualized. Individuals expressing social identities and performing inherited structural responsibilities establish, duplicate, change, or modify certain organizational systems. This dynamic process is summarized by the phrase "historical materialism" (Rupert, 2017, pp. 35–36).

Marxism has consistently criticized capitalism as a form of social organization for the production of goods. For some, this entails establishing an alternative theoretical framework—often a variant of socialism—to manage the production of real goods. This critique manifests in evaluations of how capitalism contributes to environmental degradation and how corporations impact global environmental policymaking within the context of international environmental politics.

It has frequently been pointed out that both Karl Marx and Friedrich Engels, his intellectual partner, either neglected to address nature or perceived it solely as a tool (Lipschutz, 2022). Many contemporary Marxist scholars have sought to refute the former claim (Parsons, 1985) and amend the aspects of the latter that contain truth (Foster et al., 2018; Kovel, 2017; O'Connor, 1996; Pepper, 2001). Considering that Marx's writings predate the evident ecological crises by a century, Kovel (2017) argues that "when confronting a society, such as ours, in a state of significant ecological decay, we should expect its established form to be both inadequate and flawed."

Ecological processes and components are too complex to be comprehended in a vacuum, according to Marx and Engels, who opposed historical materialism's reductionist tendencies (Merchant, 2018, p. 44). Natural entities were traditionally considered essential to human existence and consciousness, eventually supplying the requisite resources for survival. Nonetheless, it was recognized that people has the capacity to influence and intentionally damage the environment via their labor: Engels cautioned, "Let us not...deceive ourselves

excessively due to our human triumphs over nature." "Each victory exacts a toll on us" (Merchant, 2018, p. 56). The unregulated exploitation of natural resources by capitalists was particularly condemned for disturbing the equilibrium between mankind and the environment (Merchant, 2018, pp. 52–54).

Marx's examination of how capitalism contributes to environmental degradation was perhaps the most sophisticated. The primary idea in this criticism was the "social metabolism" that emerged from Marxist theory. An organism's ability to use energy and resources from its environment to build its own building blocks is called metabolism (Foster et al., 2018, p. 402). Hence, "the complex, dynamic interchange [of matter and energy] between human beings and nature" is captured by social metabolism (Foster, 2010, p. 158). A "metabolic rift" over soil nutrients was inevitable when capitalism severed the "metabolic interaction" between people and the planet (Marx, 1883; Foster et al., 2018, p. 77). Historically, when production and consumption were kept local, the land's nutritional base and productivity were maintained by the reintegration of crops and organic waste into the soil as fertilizer. According to Foster et al. (2018), the urban-rural split emerged when soil nutrients were turned into urban garbage as a result of the accumulated drive of capitalism, which pushed people out of rural regions and into cities.

Modern scholars have built upon Marx's "metabolic rift" concept to assess today's global economy, which poses significantly greater environmental threats than those of the 19th century (Foster et al., 2018; Moore, 2018; Weis, 2018). According to Foster et al. (2018), the "metabolic rift" has grown due to colonialism, imperialism, and market dynamics that prioritize the accumulation of money by core nations above the preservation of periphery areas' environmental health. Several "rifts" have opened up in the system as a result of "technological fixes," such as the extensive use of synthetic nitrogen fertilizers to compensate for lost organic soil nutrients. Foster and colleagues note that while soil runoff increases nutrient concentrations in waterways, leading to eutrophication and marine "dead zones," the resulting nitrogen compounds released into the atmosphere further contribute to global warming (2018, pp. 81–82). They argue that to successfully confront this crisis, capitalism—which is inherently anti-ecological—must be entirely rejected. Marx's vision of "a society of associated producers...[who] can regulate their exchange with nature in accordance with natural limits and laws, while retaining the regenerative properties of natural processes and cycles" (2018, p. 86) should replace industrial-scale agricultural production. However, it is generally suggested that a "revolution in the constitution of human society itself...aimed at the creation of a just and

sustainable society" represents the only viable solution to the ecological crisis (2018, pp. 38, 436).

Like Tony Weis, another Marxist, "the chronic biophysical contradictions of industrial capitalist agriculture are accelerating" and causing "destructive consequences" and unpredictable food costs. The capitalist organizational logic that demands ever-increasing efficiency to accumulate wealth gives birth to this conundrum. Soil salinization and erosion, water scarcity, biodiversity loss, greenhouse gas emissions, and a "stubborn dependence" on limited fossilized biomass are all externalized costs of the system that will cause it to collapse (Weis, 2018, pp. 316-317). Despite this uncertainty, Weis sees an opportunity to "rebuild bio-diverse food systems and remake and valorize agricultural work" (2018, p. 315).

The second facet of capitalism criticism is strongly impacted by the historical materialism of twentieth-century political thinker Antonio Gramsci. Instead of predetermined economic stages, Gramsci argued that social transformation could be accomplished by "historically situated social agents whose actions are enabled by their social self-understandings" (Rupert, 2017, p. 40). This theory of agency, while accepting many of Marx's ideas regarding capitalism and its interactions, offered a more comprehensive framework. A fundamental theme that motivated Gramsci's investigations was "hegemony," which is "the persistence of specific social and economic structures that systematically advantage certain groups" (Levy & Newell, 2020, p. 86). Ideological and strategic conceptions of power emerge from this idea. The first reason power is ideological is that stable social institutions tend to support one specific group because everyone else accepts their policies as "common sense." Nonetheless, this presents chances for non-governmental organizations to actively confront capitalists in a "war of position," illuminating the hegemonic pursuits' inherent tensions and contradictions and finally suggesting an alternate social order (Rupert, 2017, p. 40; Levy & Newell, 2012).

According to Patterson (2004), Newell & Paterson (2006), Levy & Newell (2020, 2023), and Levy & Egan (2013), the neo-Gramscian camp had a major impact on international environmental politics in the 1990s and 2000s. According to Paterson (2004), there are three main components of a historical materialist framework that help to explain the worldwide politics of climate change. The first part is realizing that governments, according to Marxist theory, have the main goal of capital accumulation, which gives rise to the structural power of capital. According to Paterson (2004), this gives capitalists more ability to influence investment decisions and spread their "hegemonic ideas regarding the prerequisites for economic growth"

(p. 158). In the second section, we go into Gramsci's idea of "hegemony," which encompasses the ideological disputes around the ruling class's objectives in order to acquire the necessary circumstances. Ongoing ideological struggles are necessary for capital to maintain capitalist society (Paterson, 2004, p. 158). The last part emphasizes how capital accumulation processes both cause and exacerbate inequality. According to Paterson, the main reason for the many North-South conflicts in international climate discussions is "structural inequality in the political economy" (2004, pp. 171-172).

Newell and Paterson present alternative viewpoints on climate negotiations through a "neo-Gramscian" lens. This approach contests two fundamental misunderstandings that underpin regime analyses: the first being the belief that "markets and states are two distinct spheres of human action," and the second being "the presumption that states can be seen as unitary rational actors" (Newell & Paterson, 2006, pp. 679–680). Their framework highlights the political-economic factors that influence governments' views on climate negotiations. Newell and Paterson acknowledge the substantial impact of fossil fuel lobbyists by recognizing that governments operate within a capitalist context, where fossil fuels are central to economic growth. They also emphasize that this influence is not total, as capital does not form a "homogeneous bloc." By forging "tactical alliances" with environmentalists for other aims, the insurance sector managed to weaken the fossil fuel lobby's power, as mentioned by Newell and Paterson (2006, pp. 680–681). Nevertheless, considering the essential role of coal and oil in the global economy, the interests of the fossil fuel lobby also create the necessary conditions for accumulation for most "fractions of capital," which limits this potential (2006, pp. 692–693).

Levy and Newell (2020, 2023) analyzed corporate political strategies within the broader framework of international environmental regulation using a neo-Gramscian lens. As stated by Levy and Newell (2020), these strategies encompass "technological innovation, collaborations with NGOs, and the establishment of private standards." In the collection edited by Levy and Newell (2023), multiple authors explore the "war of position" related to biotechnology, water, hazardous waste trade, and climate change, among other subjects. These studies illuminate the strategies employed by both marginalized and dominant social groups to either reinforce or challenge existing systems, thereby challenging the deterministic views that characterize international environmental politics.

Critical Theory: From the Frankfurt School to Jürgen Habermas

When it comes to international environmental politics, critical theory has made a big splash. The group of social theorists known as the Frankfurt School came together in the middle of the twentieth century at the Institute for Social Research in Frankfurt. According to Biro (2019), there are two "generations" within this philosophical lineage. One contains Jürgen Habermas while the second includes Theodor Adorno, Max Horkheimer, and Herbert Marcuse. Though the Frankfurt School's odds of bringing down the class structure were slim, they maintained Marx's criticism of dominance. This trait indicates their (partially realized) influence on international environmental politics, as their views on dominance are congruent with those of green political theorists. Many historians, like William Leiss (2019) and Andrew Biro (2019, p. 10), believe that the Frankfurt School may shed light on the conflicts and environmental disasters of the modern period by examining its central tenet, the supremacy of nature. Both Adorno and Horkheimer denounced rationalism, or instrumental reason, for permeating every facet of existence and establishing power over all living things. Horkheimer (1947, referenced in Leiss, 2019, p. 23) asserted that reason is an affliction stemming from humanity's ambition to control nature.

From an instrumental standpoint, nature is regarded just as "a reservoir of resources" to be utilized for human benefit, devoid of inherent worth (Biro 2019, p. 14). Nevertheless, "human beings alienate themselves from nature" in their endeavors to subjugate it, ultimately leading to the oppression of other humans. Leiss elucidates that the augmented social structure required to refine, enhance, and regulate nature exacts a cost, as “the system's dominion over humanity intensifies with each departure from the authority of nature.” An augmented communal control over nature correlates with a similarly heightened subjugation of certain persons by others at every phase (Leiss, 2019).

The current relevance of this has been partially addressed by Saurin (2002), who argues that the extensive and systematic degradation of ecosystems stems from critical aspects of modernity, such as “distanciation,” “technical–rationalism and bureaucracy,” and the marginalization of various local knowledges and practices (2002, pp. 46–49). Once again, the example of agriculture illustrates this notion, demonstrating how "an agricultural episteme rooted in monocultures and mass production" has eclipsed social interactions based on subsistence.

The criticism of instrumental reason by the Critical Theorists echoes the environmentalists' belief that humans see the non-human environment as a "troubled" resource that can only be used to achieve their own ends (Dobson, 2001, p. 194). Many critical thinkers have a gloomy view of the future of society and reject the notion that people may return to "a romantic pre-Enlightenment human-nature relationship" (Dobson, 2001, p. 194). Nonetheless, there remains an opportunity to "domesticate" instrumental reason and incorporate substantive reasoning into it. A discussion infused with values regarding the goals society seeks is essential for substantive reasoning; merely assessing the methods to achieve predetermined objectives is insufficient. Horkheimer argued that such reasoning can only advance once specific material conditions for human societies have been fulfilled. Yet, since his writings in the 1940s, environmental degradation has progressed alongside material expansion. Consequently, the specific circumstances that foster meaningful thought remain unclear.

Members of Habermas's Critical Theorists group have offered a response to this question. on deep ecologists in particular, Eckersley (1998) voiced doubt on Habermas's involvement with the green movement. At issue was Habermas's reconsideration of instrumental reason as criticised by the Frankfurt School. Because he saw technocrats and experts using social concerns as a tool to manipulate the public, Habermas's concept of the "scientization of politics" was an opposition to this practice. When applied to political and social issues, science and technology, says Habermas (1979, quoted in Outhwaite, 2019, p. 20), "merely in the end to conceal pre-existing, unreflected social interests and prescientific decisions." At this point, they become ideology. However, unlike the Frankfurt School, Habermas clearly differentiated between human connections to nature and human relationships with one another. He contended that work and technology are the exclusive avenues via which individuals may understand and interact with the non-human realm. The survival of the human species is threatened if we act otherwise (Eckersley, 1998, pp. 743, 753). Nonetheless, "communicative rationality," which addresses issues by striving for a reasoned consensus, should govern how individuals relate to one another. Thus, rationality concentrates on uncovering societal norms and objectives for open, collaborative critique rather than effectively achieving predefined goals.

The arguments put out in this process should be acceptable to persons in diverse perspectives and should be generalizable beyond specific interests. Eckersley recognized that this method may facilitate human liberty, although it does not reduce authority over the non-human realm, since "a norm is deemed 'right' if established through a consensus of truthful, uncoerced, and rational agents." Consequently, Critical Theory cannot contest if a “speech community”

resolve—following free and reasonable discourse—to utilize technology in a way that enables it to manage and rule "external nature" (Eckersley, 1998, p. 757).

Many scholars have drawn upon Habermas, particularly the notion of "deliberative democracy," to advocate for environmental issues. Dry's contributions to this area are arguably the most recognized and comprehensive (e.g., 1995, 2002, 2024). He contends that the ecological potential of communicative rationality requires the acknowledgment of an "anthropocentric life-support approach" as a vital base for dialogue (Dry, 1995, p. 35). The broad interest in sustaining the "productive, protective, and waste-assimilative value of ecosystems" is identified as "the generalizable interest par excellence," something that concerns everyone (Dry, 1995, pp. 34, 204). Therefore, there is a significant likelihood that social norms which gain intellectual acceptance might also be "ecologically rational." Another argument presented by Baber and Bartlett is the necessity of broadening the faction of people capable of generating information and making decisions beyond just scientists and technocratic elites. Simply providing more information will not sway those opposed to an environmental initiative; rather, it is through "public involvement in the production of information via a process of discursive will formation" that change will occur (Baber & Bartlett, 2023, p. 97). They also emphasize that, without a human commitment, it proves challenging to "protect the environment from human degradation," and that such commitment can only be fostered through democratic and decentralized public discourse (2023, p. 98).

Additional proponents of this perspective include Douglas Torgerson (2007) and Robert Brulle (2020). Brulle argues that cultivating a vibrant public sphere is crucial for advancing both human and ecological liberation. This space should facilitate substantial dialogue and contention related to ecological sustainability and the necessary actions to promote it (Brulle, 2020, p. 16). Scholars in the realm of global environmental politics have increasingly emphasized the importance of global discussions to address the worldwide aspects of current environmental challenges. For example, Dingwerth (2017) analyzed the deliberative quality of transnational environmental networks and uncovered trade-offs between deliberative quality and other democratic characteristics such as inclusivity, accountability, and transparency. Meanwhile, Dry and Steven (2019) have explored global climate governance through the framework of deliberative systems, proposing ways to enhance democracy (understood as the development of deliberative capabilities) at this level. They have highlighted the importance of fostering discourse across climate narratives and steering clear of deliberative enclaves (Steven & Dry, 2020a); they also stressed the necessity of enhancing deliberation and

legitimacy in multilateral negotiations by implementing a model of "minilateralism plus discursive representation" (Steven & Dry, 2020b).

Foucauldian Approaches

Some Certain experts in global environmental politics, discontent with the results of conventional International Relations (IR) theory, have drawn inspiration from the concepts of 20th-century French social theorist Michel Foucault. Research employing a Foucauldian approach posits that the physical universe, encompassing "nature," possesses no inherent meaning unless it is ascribed by human interpretation. Assigning meaning constitutes an exercise of power; there is no inherent link between content and its interpretation. This notion is termed "productive power" by Foucauldians. This authority stems from the ability to determine how humans interact with the physical world. The authority to ascribe meaning encompasses the ability to reject, conceal, or diminish the credibility of alternative interpretations. In global environmental politics, scholars influenced by Foucault have focused on two main areas of inquiry: governmentality studies that illuminate the pervasive effects of productive power on individuals' lives, and discourse analysis that uncovers potential meanings related to the environment and the processes through which a singular interpretation has achieved dominance and institutionalization.

Hajer's examination of the approach to environmental policy development processes in the UK and the Netherlands constituted one of the first contributions. He argued that "policy-making involves much more than merely devising inventive solutions." Primarily, it requires redefining a specific social phenomenon so that potential solutions can be identified (Hajer, 2003, p. 2). Hajer therefore traces the marginalization of earlier viewpoints concerning the significant restructuring driven by environmental crises, starting in the late 1970s when a new, more manageable framework for understanding environmental degradation emerged. With the belief that "pollution prevention pays," the narrative of "ecological modernization" became dominant. Environmental calamities are perceived as chances for firms to innovate and penetrate new markets rather than obstructing economic progress. In contrast to conceptions such as "limits to growth," ecological modernization is compatible with current political and economic frameworks, which largely accounts for its prevalence as a policy discourse in Europe.

Ideologies do not become dominant just because sensible politicians figure out how to frame problems in the best way. When assessing the impact of scientific data on global debates over ozone depletion, Litfin emphasized the role of "knowledge brokers." Litfin (2002) states that these people "frame and interpret scientific knowledge" and have a lot of political and productive power, especially in situations when the science is not obvious. Litfin's study shows that "rhetorical devices," such the words "ozone layer" and "ozone hole," helped get people to agree with a risk-oriented narrative that advocated for the cautious phase-out of compounds that were bad for the ozone layer.

Recent work by Epstein adds to Foucauldian environmental politics; the author focuses on whaling and the power dynamics that lead to the anti-whaling narrative's ascent, as opposed to the pro-whaling narrative's (Epstein, 2018). Due to her belief that discourse analysis necessitates questioning "what we accept as correct," the author steadfastly refused to acknowledge the anti-whaling narrative as "the truth" that triumphed over a historical "wrong." Epstein (2018) argues that environmentalists "reframed perceptions and understanding by creating a new discourse on whales and whaling," which led to a shift in state identities away from whaling advocates and toward anti-whaling ones. However, her goal is to show how this process played out. Epstein argues that most states did not approach the matter in a manner purely aimed at promoting their material interests; therefore, the shift in how states treated whales cannot be accounted for solely by a regime theoretical framework based on cost-benefit analysis. Rather, they were "socialized" in a manner that genuinely redefined their identities and areas of concern within the anti-whaling regime.

To support alternative theories of global environmental governance, various scholars have utilized Foucault's concept of "governmentality" Death, 2018; Epstein, 2018; Luke, 2019; Methmann, 2020; Oels, 2023; Paterson & Stripple, 2018). This methodology has been described as the "analytics of government" (Dean 2010: 16). In Foucault's perspective, "government" encompasses the "conduct of conduct," where "conduct" functions as both a verb and a noun. As explained by Death (2018), governing involves the intentional practice of controlling, directing, or guiding one's own behavior or that of others. Governmentality studies "how we conceptualize governing," focusing on the rationalities behind governmental practices (Death, 2018, p. 24). Death employs this Foucauldian concept to examine the "rationality of government" inherent in "sustainable development." He argues that this involves "viewing sustainable development as a collection of governmental practices that create unique ways of seeing, knowing, acting, and being" (Death, 2018, pp. 5, 9). By utilizing this approach, he

highlights how "contests between competing rationalities of government" during the Johannesburg Summit influenced the determination of "the scope, forms, and identities of governmental action" (Death, 2018, pp. 5, 9). The prevailing rationale was described as "an advanced liberal rationality of government that relied on the responsible and voluntary actions of partners who selected themselves and acted independently of conventional centers of power" (Death, 2018, p. 9).

Building on prior work, Oels asserted that “advanced liberal government has articulated climate change as an economic concern that necessitates market-based solutions to enable cost-effective technological responses” (Oels, 2023, p. 185). Oels claims that this rationale represents a variant of weak ecological modernism. The Kyoto Protocol and the United Nations Framework Convention on Climate Change (UNFCCC) have "rendered governable" climate change by institutionalizing this narrative (Oels, 2023, p. 199).

Feminism

Within the realm of GEP, a singular female perspective does not exist. Diverse feminist viewpoints converge in their analysis of gender disparities and the power dynamics that sustain them. Certain feminist researchers examine the gendered assumptions underlying global environmental governance and their effects on gender relations, while others investigate the representation of women within this governance and their significant absence. It seems that matters concerning gender and women are not given adequate attention in GEP. Bretherton remarked in 1998 that efforts to "place gender on the agenda" of international environmental affairs have resulted in the inclusion of women but not the integration of gender (Bretherton, 2006, p. 85). She clarifies that "(g)ender analysis addresses the widely accepted and anticipated patterns of relationships between men and women, rather than simply including women in environmental decision-making and policy." The prioritization of "masculine values" over "feminine values" means that merely incorporating women into policymaking is not enough. Closing the gender gap alone will not dismantle the entrenched patriarchy (Bretherton, 2006, p. 90). Bretherton's assertion of the close connection between patriarchy and environmental degradation underscores the significance of this issue. She specifically argues that the "overlapping norms and principles of neoliberalism and Anglo-American hegemonic masculinity" that support the prevailing form of "capitalist patriarchy" in contemporary society "authorize practices that directly contradict the ethic of care for the environment" (Bretherton, 2021, pp, 103–104).

MacGregor has recently expressed similar views, asserting that environmentalism has become male-dominated, as "[m]en hold sway over the issue at all levels, serving as scientific and economic experts, entrepreneurs, policymakers, and spokespersons" (MacGregor, 2019, p. 128). Rather than dismissing these findings as trivial and unproblematic, feminist scholars in GEP aim to get to the roots of the underlying gender disparities. MacGregor (2019) observes that prevalent scientific and security-oriented framings contribute to "rendering women and their issues invisible," resulting in an increasing masculinization of climate change discourse. Shiva (1997) claims that science is rooted in a "patriarchal mode of knowing that is inherently violent towards both nature and women." Boyd's (2019) assessment of the Clean Development Mechanism indicates that "the patriarchal foundations of sustainable development and climate-change policy agendas" have weakened the efficacy of mitigation efforts. Her analysis of the Noel Kempff project in Bolivia suggests that "practical gender needs," which are "immediate necessities that women identify as lacking in a particular context, enabling them to fulfill expected roles: such as a health post, vegetable gardens, or a water pump," were effectively included. However, "strategic gender needs," defined as "requirements essential for women to transform their societal status, including equal wages, control over one's body, access to and ownership of land or other property, or freedom from domestic violence," were overlooked (Boyd, 2019, p. 102).

Despite these crucial points, MacGregor maintains that feminist studies on the gender aspects of climate change are still in little supply. "How gendered environmental narratives shape and inform dominant perceptions of the issue," the effects of climate change on men's and women's everyday lives, "gender disparities in the perception of climate change-related risks," and gendered reactions to climate change challenges are some of the important areas she identifies for gender research (MacGregor, 2019, pp. 127-133).

Conclusion

After introducing the field and its expanding body of literature, we should wrap up by asking, as is relevant to almost all of the aforementioned studies, "Can the current global political-economic framework survive in the face of rising resource demands and escalating adverse effects from pollution?" This is arguably the most pressing question in GEP. Research summaries pertaining to this question may be found in Haas (2018) and Clapp and Dauvergne (2023). The environmental impacts of globalization are significantly magnified by the increasing levels of cross-border trade, migration, travel, and consumer behavior. There are

two primary functions that the environment serves in political economy. It processes and absorbs the massive amounts of trash that are a result of production and consumption on a global scale, acting as a sink for these materials. In addition, the resources that power economies throughout the world and generate riches originate from this region (Cass, 2020). In light of these growing expectations, GEP is deeply concerned about the long-term viability of the existing international political and economic structure.

According to proponents of the current system and the market's central role in resource distribution, a more prosperous world is essential for addressing environmental concerns and achieving a sustainable society because it will generate the necessary cash and political will (Simon, 2006). It is possible, according to some scholars, to make the system sustainable. Mol (2021) posits that a normative focus on "ecological modernization" could provide a pathway for aligning the current system with sustainability and environmental preservation. He asserts that sustainability can be rooted in enlightened self-interest, where individuals come to understand that to maintain the global system for future generations, certain consumption patterns must change. Conversely, institutionalists like Biermann and Bauer (2023) argue that achieving sustainability may require modifying the system and establishing new international governance frameworks.

A radical critique within the GEP field of study contends that the current system is fundamentally deficient and unable to achieve sustainability, in contrast to several researchers who argue that the system is either sustainable as it is or can be altered and preserved. Daly (1981, 2003) contends that to attain a "steady-state equilibrium," it is imperative to limit human population increase and resource consumption to ecologically sustainable levels. This necessitates relinquishing the existing system's emphasis on perpetual economic expansion and heightened consumerism, alongside the implementation of some kind of population regulation. Lipschutz (2022) asserts that the current global political and economic structures are inherently defective since they promote unsustainable resource use. He promotes a comprehensive reorganization of the existing system. A significant portion of the literature on global environmental politics focuses on the sustainability of the present international political and economic system and its potential for transformation into a sustainable one. This inquiry will persist in influencing studies in global environmental politics moving forward.

After the 1992 Rio Earth Summit, Steve Smith (2001) analyzed the emerging field of GEP from an outsider's viewpoint. His research led him to the conclusion that GEP was still "on the

periphery," untouched by the theoretical disputes that plague other fields of international relations and controlled by liberal institutionalists. Some of his observations still hold true, especially regarding most of the academic investigation and literature produced since that time. The rationalist framework continues to be widely embraced, clearly motivated by the aim of strengthening and expanding global cooperation to tackle environmental challenges. The objective is to compile empirically supported scientific data that is pertinent to policymaking in global environmental governance. Numerous empirical works have examined the structure and functioning of international environmental organizations. worldwide Human Dimensions Program of the International Social Science Council (Biermann et al., 2020) is a minor node in a much broader network of worldwide scientific collaboration, and it is via this program that this material has been provided. This appears to be the stance that would be supported by mainstream liberal institutionalism.

Many participants in this endeavor do not inherently identify as positive social scientists. Since the early 1990s, conventional interpretations of international relations theory have evolved to contest the inflexible assumptions of state-centric rational choice analysis, becoming more introspective and cognitive. This domain has seen significant transformation since Smith's (2001) literature survey. Among those who view the predominant emphasis on international cooperation as inherently defective, critical "revolutionist" scholarship in international political economics has remained significantly influential. The realist school, prominent in other areas of IR theory, has largely neglected discussions on global environmental change. Besides the connections between armed conflict and environmental degradation, climate change is intricately linked to the politics surrounding energy resources, a core focus of realism analysis. Consequently, the current situation may be undergoing a shift.

For a long time, specialists in international politics regarded the environment as a minor or inconsequential issue. However, during the 1990s, this trend shifted as environmental concerns gained traction in global governance and were recognized as significant political matters on a global scale. Still, rationalist frameworks, particularly neoliberal institutionalism (regime) theory—have predominantly influenced the study of global environmental politics since then. Certainly, this approach can yield valuable insights into interstate cooperation concerning shared resources and institutional dynamics. Nonetheless, the purpose of this inquiry is to investigate the abundant theoretical landscape that exists beyond this traditional theoretical approach. For individuals who are truly worried about the ecological and societal effects of global warming, these competing ideas offer a helpful range of perspectives. These methods,

which depart from positivist social science, provide a basis for evaluating environmental governance on a global scale by shedding light on its flaws and underappreciated parts. Scholars may utilize these approaches to try to comprehend the world more thoroughly, rather than just as a setting for their studies.

Cox (1989) noted a well-known contrast between critical theory and problem-solving theory, and this highlights it. To solve problems, the problem-solving strategy uses preexisting social and power structures and the institutions that represent them, argues Cox. The main goal is to make sure these institutions and their links are working well. Instead of accepting social structures and power dynamics at face value, critical theory investigates them by looking at their background, present state, and possibilities for change. Its goal is to evaluate the action's underlying structure, which is an area where problem-solving theory falls short (Cox, 1989, pp. 128-129).

Consequently, global environmental politics would greatly benefit from a diverse array of studies that incorporate both the critical theories discussed in this paper and traditional problem-solving IR theory.

References:

Adger, W.N., Paavola, J., Huq, S. and Mace, M.J. (eds) (2024) Fairness in Adaptation to Climate Change, Cambridge, MA: MIT Press.

Adorno, T.W. and Horkheimer, M. (1944/2005) Dialectic of Enlightenment, London: Verso.

Andresen, S. and Agrawala, S. (2020) “Leaders, Pushers and Laggards in the Making of the Climate Regime”, Global Environmental Change, 12: 41 – 51.

Baber, W.F. and Bartlett, R. V. (2023) Deliberative Environmental Politics: Democracy and Ecological Rationality, Cambridge, MA: MIT Press.

Baechler, G. (2007) Violence through Environmental Discrimination: Causes, Rwanda Arena and Conflict Model, Dordrecht: Kluwer.

Barkin, J.S. and Shambaugh, G. E. (eds) (2007) Anarchy and the Environment: The International Relations of Common Pool Resources, Albany: SUNY Press.

Barnett, J. (2019) The Meaning of Environmental Security: Ecological Politics and Policy in the New Security Era, London: Zed Books.

Barrett, S. (2024) Environment and Statecraft: The Strategy of Environmental Treaty-Making, Oxford: Oxford University Press.

Beckerman, W. and Pasek, J. (2019) Justice, Posterity and the Environment, Oxford: Oxford University Press.

Benedick, R.E. (2006) Ozone Diplomacy: New Directions in Safeguarding the Planet, Cambridge, MA: Harvard University Press.

Bernstein, S. (2019) The Compromise of Liberal Environmentalism, New York: Columbia University Press.

Betsill, M.M. (2018) "The United States and The Evolution of International Climate Change Norms", in P.G. Harris (ed.) Climate Change and American Foreign Policy, New York: St Martin's Press.

Betsill, M.M. and Corell, E. (eds) (2018) NGO Diplomacy: The Influence of Nongovernmental Organizations in International Environmental Negotiations, Cambridge, MA: MIT Press.

Betsill, M.M., Hochstetler, K. and Stevis, D. (eds) (2024) Palgrave Advances in International Environmental Politics, New York: Palgrave.

Bevir, M. (2024) "How Narratives Explain", in D. Yanow and P. Schwartz-Shea (eds) Interpretation and Method: Empirical Research Methods and the Interpretive Turn, New York: M.E. Sharpe.

Biermann, F. (2017) "Earth System Governance as a Crosscutting Theme of Global Change Research", Global Environmental Change: Human and Policy Dimensions, 17: 326 – 37.

Biermann, F. et al. (2020) "Transforming Governance and Institutions for Global Sustainability: Key Insights from the Earth System Governance Project", Current Opinion in Environmental Sustainability, 4: 1 – 10.

Biermann, F. and Bauer, S. (eds) (2023) A World Environment Organization: Solution or Threat for Effective Environmental Governance? Burlington, VT: Ashgate.

Biermann, F. and Pattberg, P. (2018) "Global Environmental Governance: Taking Stock, Moving Forward", Annual Review of Environment and Resources, 33: 277 – 94.

Biermann, F. and Siebenhüner, B. (eds) (2019) Managers of Global Change: The Influence of International Environmental Bureaucracies, Cambridge, MA: MIT Press.

Biro, A. (ed.) (2019) Critical Ecologies: The Frankfurt School and Contemporary Environmental Crisis, Toronto: University of Toronto Press.

Blaikie, N. (2001) Approaches to Social Enquiry, Cambridge: Polity Press.

Bocking, S. (2021) Nature's Experts: Science, Politics and The Environment, New Brunswick, NJ: Rutgers University Press.

Bodansky, D. (2019) The Art and Craft of International Environmental Law, Cambridge, MA: Harvard University Press.

Boehmer-Christiansen, S. (2003) "Britain and the International Panel on Climate Change: The Impacts of Scientific Advice on Global Warming: Integrated Policy Analysis and the Global Dimension", Environmental Politics, 4: 1 – 18.

Boyd, E. (2019) "The Noel Kempff Project in Bolivia: Gender, Power, and Decision-Making in Climate Mitigation", in G. Terry (ed.) Climate Change and Gender Justice, Rugby: Practical Action Publishing.

Breitmeier, H., Young, O. and Zürn, M. (2024) Analyzing International Environmental Regimes: From Case Study to Database, Cambridge, MA: MIT Press.

Brenton, T. (2002) The Greening of Machiavelli: The Evolution of International Environmental Politics, London: Earthscan Publications.

Bretherton, C. (2021) "Movements, Networks, Hierarchies: A Gender Perspective on Global Environmental Governance", Environmental Politics, 3 (2): 103 – 19.

—— (2006) "Global Environmental Politics: Putting Gender on the Agenda?" International Studies, 24: 85 – 100.

Brown, S., Cornell, N.W., Fabian, L.L. and Weiss, E.B. (1985) Regimes for the Ocean, Outer Space and Weather, Washington, DC: Brookings.

Brulle, R.J. (2020) "Habermas and Green Political Thought: Two Roads Converging", Environmental Politics, 11 (4): 1 – 20.

Bryner, G. (2018) "Environmental justice", in R.A. Denemark (ed.) International Studies Encyclopedia, London: Blackwell Publishing.

Busby, J. (2018) "International Organization and Environmental Governance", in R.A. Denemark (ed.) International Studies Encyclopedia, London: Blackwell Publishing.

Buzan, B., de Wilde, J. and Waever, O. (2006) Security: A New Framework for Analysis, Boulder, CO: Lynne Rienner.

Caldwell, L.K. (1980) In Defense of the Earth: International Protection of the Biosphere, Bloomington: University of Indiana Press.

Cass, L.R. (2024) The Failures of American and European Climate Policy: International Norms, Domestic Politics and Unachievable Commitments, Albany: SUNY Press.

—— (2020). "The Global Environment: An Overview", in R. Pettman (ed.) Handbook on International Political Economy, London: World Scientific.

Chalecki, E.L. (2018) "Environment and Security", in R.A. Denemark (ed.) International Studies Encyclopedia, London: Blackwell Publishing.

Chasek, P.S. (2019) Earth Negotiations: Analyzing Thirty Years of Environmental Diplomacy, New York: United Nations University Press.

Chasek, P.S., Downie, D.L. and Brown, J.W. (2018) Global Environmental Politics , 5th edn , Boulder, CO : Westview Press.

Choucri, N. (ed.) (2001) Global Accord: Environmental Challenges and International Responses, Cambridge, MA: MIT Press.

Clapp, J. and Dauvergne, P. (2023) Paths to a Green World: The Political Economy of the Global Environment, Cambridge, MA: MIT Press.

Conca, K., Alberty, M. and Dabelko, G. (2011) Green Planet Blues: Environmental Politics from Stockholm to Rio, Boulder, CO: Westview Press.

Cox, R. (1997) "Social Forces, States and World Orders: Beyond International Relations Theory", Journal of International Studies, 10 (2): 126 – 55.

Daly, H. (1989) Toward a Steady-State Economy, San Francisco, CA: W.H. Freeman.

—— (2012) Beyond Growth: The Economics of Sustainable Development, Boston, MA : Beacon Press .

Dauvergne, P. (ed.) (2023) Handbook of Global Environmental Politics, Northampton, MA : Edward Elgar .

Dean, M. (2018) Governmentality: Power and Rule in Modern Society, 2nd edn , London : Sage .

Death, C. (2018) Governing Sustainable Development: Partnerships, Protests and Power at the World Summit, London: Routledge.

DeSombre, E.R. (2018) Domestic Sources of International Environmental Policy: industry, environmentalists and U.S. power, Cambridge, MA: MIT Press .

—— (2024) Global Environmental Institutions, New York: Routledge.

—— (2017) The Global Environment and World Politics, New York: Continuum .

Deudney, D. (2015) "The Case Against Linking Environmental Degradation and National Security", Journal of International Studies, 49 (3): 461 – 76 .

Dimitrov, R.S. (2024) Science and International Environmental Policy: Regimes and Nonregimes in Global Governance, Boulder, CO: Rowman and Littlefield .

Dingwerth, K. (2017) The New Transnationalism, Hound mills : Palgrave Macmillan .

Dobson, A. (2001) "Critical Theory and Green Politics" , in A. Dobson and P. Lucardie (eds) The Politics of Nature: Explorations in Green Political Theory , London : Routledge .

Dry, J. (2023) The Politics of the Earth: Environmental Discourses , 2nd edn , Oxford : Oxford University Press .

Dry, J.S. (2024) Deliberative Global Politics, Cambridge: Polity.

—— (2002) Discursive Democracy: Politics, Policy, and Political Science, Cambridge: Cambridge University Press.

—— (1995) Rational Ecology: Environment and Political Economy, Oxford: Basil Blackwell.

Dry, J.S. and Stevenson, H. (2019) "Global Democracy and Earth System Governance", Ecological Economics, 70 (1): 1865 – 74.

Eckersley, R. (2022) The Green State: Rethinking Democracy and Sovereignty, Cambridge, MA: MIT Press.

—— (2017) "Ambushed: the Kyoto Protocol, the Bush Administration's Climate Policy and the Erosion of Legitimacy", International Politics, 44: 306 – 24.

—— (1998) "Habermas and Green Political Thought: Two Roads Diverging", Theory and Society, 19 (6): 739 – 76.

Epstein, C. (2018) The Power of Words in International Relations: Birth of an Anti-whaling Discourse, Cambridge: Cambridge University Press.

European Council (2018) Climate Change and International Security: Paper from the High Representative and the European Commission to the European Council, S113/08, Brussels.

Falk, R. (1979) This Endangered Planet: Prospects and Proposals for Human Survival, New York: Vintage.

Falkner, R. (2020) "Global environmentalism and the greening of international society" , International Affairs , 88 (3): 503 – 22 .

Foster, J.B. (2018) Marx's Ecology, New York: Monthly Review Press.

Foster, J.B., Clark, C. and York, R. (2018) The Ecological Rift: Capitalism's War on the Earth , New York : Monthly Review Press.

Gleditsch, N.P. (2006) "Armed Conflict and the Environment: A Critique of the Literature", Journal of Peace Research , 35 (3): 381 – 400 .

Grundig, F. (2024) "Patterns of International Cooperation and The Explanatory Power of Relative Gains: An Analysis of Cooperation on Global Climate Change, Ozone Depletion and International Trade", International Studies Quarterly, 90: 781 – 801.

Haas, E.B., Williams, M.P. and Babai, D. (1985) Scientists and World Order: The Use of Technical Knowledge in International Organizations, Berkeley: University of California Press.

Haas, P.M. (1998) Saving the Mediterranean: The Politics of International Environmental Cooperation, New York: Columbia University Press.

Haas, P.M. (1998) "Obtaining Environmental Protection Through Epistemic Consensus", Millennium: Journal of International Studies, 19 (3): 347 – 63.

Haas, P.M., Keohane, R.O. and Levy, M.A. (eds) (2001) Institutions for the Earth: Sources of Effective International Environmental Protection, Cambridge, MA: MIT Press.

Haas, P.M. (2022) "When Does Power Listen to Truth? A Constructivist Approach to the Policy Process", Journal of European Policy, 11: 569 – 92.

Haas, P.M. (2018) "Environment in the Global Political Economy", in R.A. Denemark (ed.) International Studies Encyclopedia, London: Blackwell Publishing.

Haas, P.M., Keohane, R.O. and Levy, M.A. (eds) (2001) Institutions for the Earth: Sources of Effective International Environmental Protection, Cambridge, MA: MIT Press.

Habermas, J. (1979) Toward a Rational Society: Student Protest, Science, and Politics, Toronto: Beacon Press.

Hajer, M.A. (2003) The Politics of Environmental Discourse: Ecological Modernization and Policy Process, Oxford: Clarendon Press.

Harr, P.G. (2018) "International Norms of Responsibility and U.S. Climate Change Policy", in P.G. Harris (ed.) Climate Change and American Foreign Policy, New York: St Martin's Press.

—— (2019) International Equity and Global Environmental Politics: Power and Principles in US Foreign Policy , Burlington, VT: Ashgate .

ed. (2017) Europe and Global Climate Change: Politics, Foreign Policy and Regional Cooperation, Northampton, MA: Edward Elgar.

—— (2019) Environmental Change and Foreign Policy: Theory and Practice, New York: Routledge.

—— (2018) World Ethics and Climate Change: From International to Global Justice, Edinburgh: Edinburgh University Press.

Harrison, K. and Sundstrom, L. M. (eds) (2018) Global Commons, Domestic Decisions: The Comparative Politics of Climate Change, Cambridge, MA: MIT Press.

Harrison, N.E. and Bryner, G. C. (eds) (2022) Science and Politics in the International Environment, Boulder, CO: Rowman and Littlefield.

Hiskes, R.P. (2019) The Human Right to a Green Future: Environmental Rights and Intergenerational Justice, Cambridge: Cambridge University Press.

Hoffmann, M.J. (2023) Ozone Depletion and Climate Change, Albany: SUNY Press.

Homer-Dixon, T. (1999) "On the Threshold; Environmental Changes as Causes of Acute Conflict", International Security, 16 (2): 76 – 116.

Homer-Dixon, T. (2002) "Environmental Scarcities and Violent Conflict: Evidence from Cases", International Security, 19: 5 – 40.

—— (1999) The Environment, Scarcity and Violence, Princeton, NJ: Princeton University Press.

Hovden, E. (2007) "As if Nature Doesn't Matter: Ecology, Regime Theory and International Relations", Environmental Politics, 8 (2): 50 – 74.

Humphreys, D. (2004) "Hegemonic Ideology and the International Tropical Timber Organization", in J. Vogler and M. Imber (eds) The Environment and International Relations, London: Routledge.

Hurrell, A. and Kingsbury, B. (eds) (2000) The International Politics of the Environment: Actors, Interests and Institutions , Oxford : Clarendon Press.

Jasonoff, S. and Martello, M. L. (eds) (2022) Earthly Politics: Local and Global in Environmental Governance, Cambridge, MA: MIT Press.

Katzenstein, P.J. (2004) "Introduction: Alternative Perspectives on National Security" , in P.J. Katzenstein (ed.) The Culture of National Security: Norms and Identity in World Politics , New York : Columbia University Press .

Keck, M. E and Sikkink, K. (2006) Activists Beyond Borders: Advocacy Networks in International Politics, Ithaca, NY: Cornell University Press.

Keohane, R. (1992) After Hegemony: Cooperation and Discord in the World Political Economy, Princeton, NJ: Princeton University Press.

King, D.A. (2022) "Climate Change Science: Adapt, Mitigate or Ignore?" , Science , 303 : 176 – 7 .

Kovel, J. (2017) The Enemy of Nature: The End of Capitalism or the End of the World? London: Zed Books.

Krasner, S.D. (ed.) (1991) International Regimes, Ithaca, NJ: Cornell University Press.

Kütting, G. (2018) Environment, Society and International Relations: Towards More Effective International Environmental Agreements, London: Routledge.

—— (2022) Globalization and the Environment: Greening Global Political Economy, Albany: SUNY Press.

Laferrière, E. and Stoett, P.J. (2007) International Relations Theory and Ecological Thought: Towards a Synthesis, London: Routledge.

Lamy, S. (2019) "Contemporary Mainstream Approaches: Neo-Realism and Neo-Liberalism" , in J. Baylis ,S. Smith and P. Owens (eds) The Globalization of World Politics , 5th edn , Oxford : Oxford University Press.

Leiss, W. (2019) "Modern Science, Enlightenment, and the Domination of Nature: No Exit?" , in A. Biro (ed.) Critical Ecologies: The Frankfurt School and Contemporary Environmental Crisis , Toronto : University of Toronto Press .

Levy, D.L. and Egan, D. (2021) "A Neo-Gramscian Approach to Corporate Political Strategy: Conflict and Accommodation in the Climate Change Negotiations" , Management Studies , 40 (4): 803 – 29 .

Levy, D.L. and Newell, P. J. (eds) (2023) The Business of Global Environmental Governance , Cambridge, MA : MIT Press.

Levy, D.L. and Newell, P. J. (2020) "Business Strategy and International Environmental Governance: Toward a Neo-Gramscian Synthesis", Global Politics, 2 (4): 84 – 101 .

Lipschutz, R.D. (2022) Global Environmental Politics: Power, Perspectives and Practice, Washington, DC: CQ Press.

Litfin, Karen T. (2002) Ozone Discourses: Science and Politics in Global Environmental Cooperation, New York: Columbia University Press.

ed. (2006) The Greening of Sovereignty in World Politics, Cambridge, MA: MIT Press.

Luke, T. (2019) "Environmentality", in J.S. Dryzek, R.B. Norgaard and D. Schlosberg (eds) The Oxford Handbook of Climate Change and Society, Oxford: Oxford University Press.

Luterbacher, U. and Sprinz, D. (eds) (2019) International Relations and Global Climate Change, Cambridge, MA: MIT Press.

MacGregor, S. (2019) "A Stranger Silence Still: The Need for Feminist Social Research on Climate Change", Sociological Review, 57 (2): 124 – 40.

Mansbach, R., Ferguson, Y. and Lampert, D. (1984) The Web of World Politics, Englewood Cliffs, NJ: Prentice-Hall.

March, J.G. and Olsen, J. P. (2006) "The Institutional Dynamics of International Political Orders", International Organization, 52 (4): 943 – 69.

McCormick, J. (1993) Acid Earth: The Global Threat of Acid Pollution, London: International Institute for Environment and Development.

Merchant, C. (ed.) (2018) Ecology, 2nd edn, Amherst, NY: Prometheus Books.

Methmann, C.P. (2020) "The Sky is the Limit: Global Warming as Global Governmentality", European Journal of International Relations.

Miles, E.L., Underdal , A. , Andresen , S. , Wettestad , J. , Skjaerseth , J.B. and Carlin , A.M. (eds) (2020) Environmental Regime Effectiveness: Confronting Theory with Evidence, Cambridge, MA : MIT Press .

Mitchell, R.B. (2020a) "A Quantitative Approach to Evaluating International Environmental Regimes", Global Environmental Politics, 2: 58 – 83.

—— (2020) "International Environment", in W. Carlsnaes, T. Risse-Kappen and B.A. Simmons (eds) Handbook of International Relations, London: Sage.

—— (2018) International Politics and the Environment, Los Angeles, CA: Sage.

—— (2020) "International Environmental Agreements Database Project", Online. Available HTTP: < iea.uoregon.edu/ > (Accessed 25 January 2024).

Mitchell, R.B., Clark, W.C., Cash, D.W. and Dickson , N.M. (eds) (2024) Global Environmental Assessments: Information and Influence , Cambridge, MA : MIT Press.

Mol, A. (2021) Globalization and Environmental Reform: The Ecological Modernization of the Global Economy, Cambridge, MA: MIT Press.

Moore, J.W. (2018) "Environmental Crises and The Metabolic Rift in World-Historical Perspective", Organization and Environment, 63: 123– 57.

Morgenthau, H.J. (1948) Politics Among Nations: The Struggle for Power and Peace, New York: A.A. Knopf.

Neufeld, M. (2001), "Interpretation and The 'Science' of International Relations" , Review of International Studies , 19 : 39 – 61.

Newell, P. (2019) "The Elephant in the Room: Capitalism and Global Environmental Change", Global Environmental Change, 51: 4 – 6.

Newell, P. and Paterson , M. (2006) "A Climate for Business: Global Warming, The State and Capital", Review of International Political Economy , 5 (4): 679 – 703.

Newell, P. and Paterson, M. (2019) Climate Capitalism: Global Warming and the Transformation of the Global Economy, Cambridge: Cambridge University Press.

Oberthür, S. and Gehring, T. (eds) (2024) Institutional Interaction in Global Environmental Governance: Synergy and Conflict among International and EU Policies, Cambridge, MA: MIT Press.

O'Connor, J. (1996) "Capitalism, Nature, Socialism: A Theoretical Introduction", Capitalism, Nature, Socialism, 21 (1): 11 – 38.

Oels, A. (2023) "Rendering Climate Change Governable: From Biopower to Advanced Liberal Government?" Journal of Environmental Policy and Planning, 7 (3): 185 – 207.

O'Neill, K. (2019) The Environment and International Relations, Cambridge: Cambridge University Press.

O'Riordan, T. and Jäger, J. (eds) (2004) Politics of Climate Change: A European perspective, New York: Routledge.

Outhwaite, W. (2019) Habermas: A Critical Introduction, 2nd edn, Stanford, CA: Stanford University Press.

Page, E. (2024) Climate Change, Justice and Future Generations, Northampton, MA: Edward Elgar.

Park, S. (2018) World Bank Group Interactions with Environmentalists: Changing International Organization Identities, Manchester: Manchester University Press.

Park, J., Conca, K. and Finger, M. (eds) (2018) The Crisis of Global Environmental Governance: Towards a New Political Economy of Sustainability, New York: Routledge.

Parks, B.C. and Roberts, J. T. (2024) "Environmental and Ecological Justice", in M.M. Betsill, K. Hochstetler and D. Stevis (eds) Palgrave Advances in International Environmental Politics, New York: Palgrave.

Parsons, H.L. (1985) Marx and Engels on Ecology, Westport, CT : Greenwood Press .

Paterson, M. (2004) Global Warming and Global Politics , New York : Routledge .

Paterson, M. (2018) Understanding Global Environmental Politics: Domination, Accumulation, Resistance, Houndmills: Palgrave Macmillan

Paterson, M. and Stripple, J. (2018) "My Space: Governing Individuals' Carbon Emissions", Environment and Planning D: Society and Space, 28: 341 – 62.

Pattberg, P.H. (2017) Private Institutions and Global Governance: The New Politics of Environmental Sustainability, Cheltenham: Edward Elgar.

Pepper, D. (2001) Eco-Socialism, London: Routledge.

Pettenger, M.E. (ed.) (2017) The Social Construction of Climate Change, Burlington, VT: Ashgate.

Porter, G. and Brown, J. W. (2000) Global Environmental Politics, Boulder, CO: Westview Press.

Princen, T. and Finger, M. (eds) (2002) Environmental NGOs in World Politics: Linking the Local and the Global, London: Routledge.

Rajamani, L. (2018) "The Principle of Common but Differentiated Responsibility and The Balance of Commitments under the Climate Regime", Review of European Community & International Environmental Law, 39 (2): 120 – 31.

Rowlands, I.H. (2003) The Politics of Global Atmospheric Change, Manchester: Manchester University Press.

Rowlands, I. (2019) "Classical Theories of International Relations", in U. Luterbacher and D.F. Sprinz (eds) International Relations and Global Climate Change, Cambridge, MA: MIT Press.

Ruggie, J.G. (1983) "International Responses to Technology: Concepts and Trends", International Organization, 29 (3): 557 – 83.

Ruggie, J.G. (2006) Constructing the World Polity: Essays on International Institutionalization, London: Routledge.

Rupert, R. (2017) "Marxism", in M. Griffiths (ed.) International Relations Theory for the Twenty-First Century: An Introduction, London: Routledge.

Saurin, J. (2002) "Global Environmental Degradation, Modernity and Environmental Knowledge", in C. Thomas (ed.) Rio: Unravelling the Consequences, London: Routledge.

Saurin, J. (2004) "International Relations, Social Ecology and The Globalization of Environmental Change", in J. Vogler and M. Imber (eds) The Environment and International Relations, London: Routledge.

Schlosberg, D. (2017) Defining Environmental Justice: Theories, Movements and Nature, Oxford: Oxford University Press.

Schreurs, M.A. and Economy, E. C. (eds) (2005) The Internationalization of Environmental Protection, Cambridge: Cambridge University Press.

Schwartz, P. and Randall, D. (2021) An Abrupt Climate Change Scenario and its Implications for United States National Security, San Francisco, CA: Global Business Network for the Department of Defense.

Seaver, B. (2005) "Stratospheric Ozone Protection: IR theory and the Montreal Protocol on Substances that Deplete the Ozone Layer", Environmental Politics, 26: 31 – 67.

Shiva, V. (1997) Staying Alive: Women, Ecology, and Development, London: Zed Books.

Simon, J. (2006) The Ultimate Resource, Princeton, NJ: Princeton University Press.

Smith, S. (2001) "The Environment on the Periphery of International Relations: An Explanation", Environmental Politics 2 (4): 28 – 45.

Smith, S. and Owens, P. (2018) "Alternative Approaches to International Theory", in J. Baylis, S. Smith and P. Owens (eds) The Globalization of World Politics: An Introduction to International Relations, Oxford: Oxford University Press.

Sprinz, D. and Vaahtoranta, T. (2002) "The Interest-Based Explanation of International Environmental Policy", International Organization, 48: 77 – 105 .

Sprout, H.H. and Sprout, M. T. (1979) Toward Politics of the Planet Earth, New York: Van Nostrand Reinhold.

Stern, N. (2017) The Economics of Climate Change: The Stern Review, Cambridge: Cambridge University Press

Steven, H. (2020) Institutionalizing Unsustainability: The Paradox of Global Climate Governance, Berkeley: University of California Press.

Steven, H. and Dry, J. S. (2020a) "The Discursive Democratization of Global Climate Governance", Environmental Politics, 21 (2): 189 – 210.

Steven, H. and Dry, J. S. (2020b) "The Legitimacy of Multilateral Climate Governance: A Deliberative Democratic approach", Critical Policy Studies, 6 (1): 1 – 18.

Stevis, D. (2024) "The Trajectory of the Study of International Environmental Politics", in M.M. Betsill, K. Hochstetler and D. Stevis (eds) Palgrave Advances in International Environmental Politics, Houndmills: Palgrave Macmillan.

Stevis, D. (2018) "International Relations and The Study of Global Environmental Politics: Past and Present", in R.A. Denemark (ed.) International Studies Encyclopedia, London: Blackwell Publishing.

Susskind, L.E. (2002) Environmental Diplomacy: Negotiating More Effective Global Agreements, Oxford: Oxford University Press.

Susskind, L.E., Moomaw, W. and Gallagher, K. (eds) (2020) Transboundary Environmental Negotiation: New Approaches to Global Cooperation, San Francisco, CA: Jossey-Bass.

Swatuk L.A. (2024) "Environmental Security", in M.M. Betsill, K. Hochstetler and D. Stevis (eds) Palgrave Advances in International Environmental Politics, Houndmills: Palgrave Macmillan.

Torgerson, D. (2007) The Promise of Green Politics: Environmentalism and the Public Sphere, Durham, NC: Duke University Press.

Underdal, A. (1988) The Politics of International Fisheries Management: The Case of the Northeast Atlantic, New York : Columbia University Press .

United States Office of the Director of National Intelligence (2020) "Global Water Security: Intelligence Community Assessment", Online. Available HTTP: < www.dni.gov/nic/ICA_Global Water Security. (Accessed 15 January 2024).

Vasquez, J. (1991) The Power of Power Politics: A Critique, Newark, NJ : Rutgers University Press .

Victor, D. (2024) "Toward Effective International Cooperation on Climate Change: Numbers, Interests and Institutions", Politics, 66: 90 – 103.

Victor, D.G. (2019) Global Warming Gridlock: Creating More Effective Strategies for Protecting the Planet, Cambridge: Cambridge University Press

Victor, D.G., Raustiala, K. and Skolnikoff, E. (eds) (2006) The Implementation and Effectiveness of Environmental Commitments, Cambridge, MA: MIT Press.

Vog, J. (2021) "Taking Institutions Seriously: How Regime Analysis Can Be Relevant to Multilevel Environmental Governance", Global Politics, 53 (2): 25 – 39.

—— (2023) "In Defense of International Environmental Cooperation", in J. Barry and R. Eckersley (eds) The State and the Global Ecological Crisis, Cambridge, MA: MIT Press.

Waltz, K. (1987) Theory of International Politics, Reading, MA: Addison-Wesley.

Webster, D.G. (2019) Adaptive Governance: The Dynamics of Atlantic Fisheries Management, Cambridge, MA: MIT Press.

Weis, T. (2018) "The Accelerating Biophysical Contradictions of Industrial Capitalist Agriculture", Journal of Agrarian Change, 10 (3): 315 – 41.

Wendt, A. (2007) A Social Theory of International Politics, Cambridge: Cambridge University Press.

Westing, A.H. (1994) Global Resources and International Conflict: Environmental Factors in Strategic Policy and Action, Oxford: Oxford University Press.

Wight, M. (1999) International Theory: The Three Traditions, Leicester: Leicester University Press.

Wurzel, R. and Connolly, J. (eds) (2019) The European Union as a Leader in International Climate Change Politics, Abingdon: Routledge.

Young, O. (1985) Resource Management at the International Level: The Case of the North Pacific , London : Pinter and Nichols.

—— (1997) International Cooperation: Building Regimes for Natural Resources and the Environment, Ithaca, NY: Cornell University Press.

—— (2002) International Governance: Protecting the Environment in a Stateless Society, Ithaca, NY: Cornell University Press.

—— (ed.) (2005) Global Governance: Drawing Insights from the Environmental Experience, Cambridge, MA: MIT Press.

—— (2020) The Institutional Dimensions of Environmental Change: Fit, Interplay and Scale, Cambridge, MA: MIT Press.

—— (2018) Institutional Dynamics: Emergent Patterns in International Environmental Governance, Cambridge, MA: MIT Press.

Young, O.R. and Zurn, M. (2024) "The International Regimes Database: Designing and Using a Sophisticated Tool for Institutional Analysis", Global Politics, 96 (3): 121 – 41.

Young, O. , King , L. and Schroeder , H. (eds) (2018) Institutions and Environmental Change: Principal Findings, Applications and Research Frontiers, Cambridge, MA : MIT Press .