1 Introduction: The Environment and International Relations

In December 2015 the official representatives of nearly 200 countries met in Paris to negotiate an agreement that would govern the global response to climate change and its impacts well into the twenty-first century. Climate change is among the most serious problems facing the international community. Rising global temperatures are threatening livelihoods and lives worldwide, through changing weather patterns, drought, and sea-level rise that threatens the very existence of the world's small island nation states. Even so, global action to date had proven deeply disappointing. The world's largest economy, the United States, had pulled out of negotiations. Others – even the member states of the European Union (EU), usually considered a strong supporter of environmental action – were barely meeting the low targets they had agreed to, and the new engines of the global economy – China, India, and Brazil – were rapidly increasing greenhouse gas (GHG) emissions without any obligation to act. The science behind climate change continued to come under fierce attack from skeptics. Activist groups and even business actors felt excluded from the governance arena, despite the ideas and initiatives they were offering.

Global climate politics reached a nadir after the 2009 Conference of the Parties (COP) to the United Nations Framework Convention on Climate Change (UNFCCC) in Copenhagen. Much hope and optimism in the lead-up suggested that this would be the time the international community broke through and came up with a strong, binding legal agreement to meet commitments. Instead, the meeting almost foundered on the rock of national interests, and the resulting Copenhagen Accord – not even a formal agreement – was deeply disappointing to many, setting only weak goals and vague commitments to a new global fund.

The Paris meeting – the twenty-first COP to the UNFCCC – was different. On the last day of the conference nation-states announced an agreement where, rather than being allocated targets they had to meet, they had crafted individual plans of action for reducing emission, called Intended Nationally Determined Contributions (INDCs). The agreement also

contained processes for monitoring (and perhaps strengthening) those commitments over time, and general commitments to help the weakest states adapt, to encourage carbon storage, and to aspire to keep the global temperature rise to 1.5 degrees Celsius. The exhausted delegates, officials, and other observers stood to applaud at the conclusion of the meeting and the creation of the Paris Agreement.

The Paris Agreement has been hailed as a turning point, a success in the fight against climate change (Light 2015; Busby 2016). Previously uncommitted countries – the USA as well as China and other emerging major powers – have joined, and non-traditional actors, such as non-governmental organizations (NGOs), have new roles to play. Best estimates suggest that if the targets states have already set are met, we will avoid the worst impacts of global temperature rise. Paris also represents a major shift in how climate change is governed globally. It represents a more diffuse, "bottom-up" approach to global governance, which, as we shall see, is not how global environmental governance (GEG) is usually carried out. At the same time, many criticized the agreement, including many scientists, arguing that commitments are still far weaker than needed, and questioned the will of nation-states to maintain and strengthen commitments over time in the absence of strong monitoring and transparency rules, as yet to be negotiated (Sethi 2015; Geden 2015).

The outcome of the Paris meeting illustrates a major theme of this book, which directly addresses the relationship between international relations theory and the politics of GEG. From an environmentalist perspective, international actions around climate change and many other environmental problems are inadequate: they are too slow, and possibly too weak, to manage the problems we face. They do not challenge the basic global economic and political structures that drive unconstrained growth regardless of ecological limits.

From the perspective of a political scientist, especially from international relations, however, these steps represent significant progress. Given a world with a history of conflict and failed cooperation, the steps we have taken, and the extent of global environmental cooperation over the past five decades, are tremendous. We have built new organizations and institutions, empowered new actors, fostered science, knowledge building and new technology, and have nearly 200 vastly different nation-states working together in unprecedented ways. This particular tension – between environmentalist and political science views of the world – motivates this work, and much of my own thinking about global environmental politics (GEP), as a political scientist in an environmental studies department. The chapters that follow will, I hope, further illuminate this tension and suggest ways forward.

Outline and Themes

The question of when, if, and how well national governments cooperate to address shared environmental problems, from climate change to biodiversity loss to international trade in hazardous wastes, drives much of the work that applies international relations theory to environmental problems. For many years now, the tools of political science, and specifically of the discipline of international relations, have been applied to the complex set of questions around global environmental change and GEG. At the same time, insights from this body of work have informed and shaped our broader understanding of the workings of international politics, and the emphases and directions of specific theoretical approaches within the academic discipline.

However, traditional political science and international relations approaches have limits when applied to problems of such political, scientific, and social complexity as those associated with global environmental change. A spectrum of perspectives, approaches, and tools from many different disciplines helps explain the nature of the global environmental crisis and offer possible solutions. Some of these perspectives have their origin in the world of practice and policy-making, others in other social science disciplines. Many of these perspectives lie well outside the traditional disciplinary parameters of international relations theory, but are becoming more central to debates within the field of global – or international – environmental politics.[1] This book, therefore, analyzes the politics of GEG – its shape, its history, its performance, and its possible future – through a broad theoretical lens. In the process, I identify a field of study that is shaping the way we understand international politics as a whole.

Three questions guide political science inquiry into the global environment.

- First, what are the political causes of global environmental change? Are they collective action problems, where states have little incentive to control the shift of pollution or resource depletion across national borders? Alternatively, are they shaped more by the structures of a global – and globalizing – capitalist economy, which prioritizes economic growth and free-market capitalism over environmental sustainability?

[1] The term "international environmental politics" (IEP) tends to be used when the work or approaches under investigation derive most directly from international relations theory; "global environmental politics" (GEP) is a broader, more interdisciplinary term, allowing for broader sets of theoretical and methodological approaches. GEP is becoming the more common term as the field evolves, and it is the term generally used throughout this text.

- Second, what factors account for the rise of global environmental concern and the ways in which critical actors perceive environmental problems? Why has such concern fluctuated over the years? How do we handle scientific and political uncertainties about global environmental change?
- Last but not least, what constitutes GEG, and what explains the shape, emergence, and effectiveness of such governance institutions and arrangements? It is this third question, informed by perspectives on the first two, that this book seeks to address.

International relations theory illuminates the answers to these questions in many ways. With its focus on the roles of power and national interests, of international institutions and rules, and of norms and ideas in international cooperation, it provides powerful leverage in explaining why and how we see the GEG institutions we do, and why some are more successful than others. In other respects, international relations theory (at least in conventional terms) is not enough. For example, the state-centric focus of much international relations theory has traditionally downplayed the roles and activities of non-state actors – of environmental movements, corporations, even scientists – in influencing existing, and even creating their own, governance institutions. This focus has now clearly changed.

As we shall see, some scholars question the viability and worth of existing GEG institutions, and argue for dismantling and rebuilding the ways in which the global community manages environmental problems. Others argue that we have been too blinkered in how we identify and categorize institutions and practices of GEG, and urge attention be paid to politics across scales and issue areas that have not traditionally been part of the global policy agenda. In short, studies of international environmental politics and governance are dynamic and evolving, creating an exciting field of study that is applied to the most urgent environmental, economic, and social challenges of our time. Understanding these dynamics offers critical insights into the opportunities for, and barriers to meeting, these challenges.

This book, therefore, traces the evolutionary arc of GEG since it first emerged as a coherent system in the early 1970s up to the more contested and disillusioned years of the early twenty-first century, focusing both on the evolution of governance institutions and on how the study of global governance has changed. It addresses how international relations theory has been analyzed and assessed, and has itself been challenged by the emergence of GEP as a serious arena of scholarship within – and outside – the discipline. In particular, this book identifies and assesses different *sites* and *modes* of GEG: state or government-led environmental cooperation and the creation of multilateral environmental agreements (MEAs); the

emergence of a multitude of "non-state" governance initiatives, such as eco-certification schemes; and how global economic governance, from trade to development aid, has become a critical site of environmental governance. New modes of GEG include the deployment of information as a governance tool, and the rise of market mechanisms to create incentives for change.

This chapter introduces the various scholarly approaches within the broad field of international environmental politics. Chapters 2 and 3 introduce global environmental issues, or problems, and actors in international environmental politics respectively. Chapters 4 through 8 focus on the different sites and modes of global governance and its intersection with the environment. Chapters 4 and 5 address international environmental cooperation, or diplomacy: the negotiation, implementation, and impacts of MEAs. Chapter 6 turns to global economic governance – particularly of trade, finance, and aid – and how it increasingly engages with environmental issues. Chapter 7 describes "non-state" GEG: governance institutions and arrangements set up not by nation-states, but by non-state actors. Chapter 8 addresses the rise (and decline?) of market mechanisms as modes of GEG. Chapter 9 – the concluding chapter – addresses debates over where GEG is going, and how it can be best designed (if possible) to meet the challenges of the twenty-first century and beyond.

Global Environmental Governance: A Narrative Arc and Critical Debates

Defined most simply, GEG consists of efforts by the international community to manage and solve shared environmental problems. In an article published in 1970 in the influential policy journal *Foreign Affairs*, George Kennan – one of the architects of the post-World War Two world order – wrote about his own vision of GEG, then in its nascent stages (Kennan 1970). Recognizing that "the entire ecology of the planet is not arranged in national compartments; and whoever interferes seriously with it anywhere is doing something that is almost invariably of serious concern to the international community at large," he argued that the existing patchwork of national and international agencies were not up to the task of coordinating and managing the world's environment. He continues:

> One can conceive, then, by an act of the imagination, of a small group of advanced nations, consisting of roughly the ten leading industrial nations of the world, including communist and non-communist ones alike . . . constituting themselves

something in the nature of a club for the preservation of natural environment, and resolving, then, in that capacity, to bring into being an entity – let us call it initially an International Environment Agency ... This entity, while naturally requiring the initiative of governments for its inception and their continued interest for its support, would have to be one in which the substantive decisions would be taken not on the basis of compromise among governmental representatives, but on the basis of collaboration among scholars, scientists, experts ... true international servants, bound by no national or political mandate, by nothing, in fact, other than dedication to the work at hand.

Kennan was writing with full knowledge of, and indeed in order to advise, the upcoming United Nations-sponsored Conference on Humans and the Environment (UNCHE), to be held in Stockholm in 1972. At that point in time the UN was looking to expand its role into managing global environmental problems. By bringing together government representatives from 113 countries, it hoped to lay the groundwork for an architecture of GEG that would serve the planet for decades to come.

Kennan's vision represents a highly technocratic form of GEG: governance through impartial expertise rather than through the politics of conflict and compromise. The system of GEG that emerged post-Stockholm, however, was far more political, and decentralized. Since 1972 GEG has consisted primarily of the negotiation and implementation by nation-states of international (multilateral) environmental treaties and agreements on an issue-by-issue basis, often coordinated by the United Nations Environment Programme (UNEP), established at Stockholm. In other words, the dominant driving force of GEG since 1972 has not been technocracy but international diplomacy.

The evolution of this system has been framed by three subsequent global summits. The UN Conference on Environment and Development (UNCED), held in Rio de Janeiro in 1992, marked the signing of two major international agreements on climate and biodiversity, and the creation of Agenda 21, a roadmap for global sustainable development (Gardner 1992). The World Summit on Sustainable Development (WSSD), held in Johannesburg in 2002, led to no major agreements, but rather, smaller-scale partnership initiatives and development-related goals. Held at a time of heightened global tension, it also reflected disillusionment with the pace of international environmental cooperation. Finally, in 2012, the Rio+20 summit was convened, in Rio de Janeiro. Its purpose was to define and generate strategies to implement a "green economy," a global economy that fully integrates environmental and social costs and benefits. This new norm of GEG represents the culmination of a shift toward a system that integrates environmental and economic priorities, which we will chart in subsequent chapters.

More than 400 MEAs and multilateral agreements with a strong environmental component have been created since 1920, most of them since 1973. Their creation and implementation is the subject of Chapters 4 and 5. Highlights include binding agreements over ozone-layer depletion, climate change, the protection of biological diversity, and the production and use of mercury.

The governance of each issue area has followed its own arc. Climate change, as outlined above, has been the most complex and contentious. Although countries were able to agree on goals in 1992, with the creation of the UN Framework Convention on Climate Change (UFCCC), the regime subsequently weakened as the USA withdrew in 2001, and commitments waned even as scientific evidence mounted. This trajectory has – potentially – changed with the signing of the Paris Agreement in 2015. Ozone-layer depletion is, by contrast, the success story of GEP. With 197 states on board and strong regulations in place to control the production and use of ozone-depleting substances, the "hole" in the ozone layer will mend by the end of this century. Global deforestation is another case that we discuss throughout this book. There is no formal international agreement around forests; too many governments objected to global restrictions on the use of their forests as a timber resource. Instead, forest governance arrangements have emerged in other arenas. Non-state actors have established certification initiatives for sustainably managed forests, while deforestation is now addressed under climate negotiations, as maintaining forest stocks is one way to store carbon and prevent it entering the atmosphere. This fragmentation of forest governance is also reflected in the climate arena, as initiatives emerge in cities and regions, managed by firms and NGOs. Finally, chemicals-related agreements – governing, for example, hazardous waste trading, persistent organic pollutants (POPs), and the production and use of mercury – have remained squarely the focus of intergovernmental cooperation, and have moved toward integration under a single "umbrella" organization.

These MEAs, or regimes, together comprise the dominant, state-led mode of contemporary GEG. Today two different narratives challenge the practice and the study of state-led GEG. The first is one of failure. James Gustave Speth, former director of the World Resources Institute, and Dean of Yale University's School of Forestry and Environmental Studies, offers a representative view:

> [The] rates of environmental degradation that stirred the international community [a quarter century ago] continue essentially unabated today. The disturbing trends persist, and the problems have become deeper and truly urgent. The steps

that governments took over the past two decades represent the first attempt at global environmental governance, an experiment that has largely failed. (Speth 2004, pp. 1–2)[2]

According to the second narrative, we have held too narrow a view of what counts as GEG, and we need to look beyond the standard international relations repertoire of inter-state cooperation and diplomacy (Bulkeley et al. 2014; Conca 2006; Newell and Paterson 2010; Wapner 2003). By examining non-traditional actors – activists, community groups, international organizations, multinational corporations – other modes of governance, such as forest certification or emissions trading, and actions across scales – from local to global – a picture of global governance emerges that is far more multi-faceted, contentious, and potentially more democratic than the dominant model of international diplomacy. This perspective challenges the position of nation-states as the sole agents of global governance and ultimately argues that a more democratic, or participatory, vision of global governance may help us reach a more environmentally sustainable world. By broadening our field of vision, as students, scholars, or practitioners, we can attain a more complete understanding of the various forces driving – or pushing against – effective GEG.

Sites and Modes of Global Environmental Governance

Following the insights from this second debate, this book focuses on existing and new sites and modes of GEG (see Box 1.1). These are: international environmental cooperation (state-led GEG; Chapters 4 and 5), the role of global economic institutions and GEG (Chapter 6), non-state GEG (Chapter 7), and market mechanisms (Chapter 8), which utilize prices and other economic instruments to shape behavior. "Sites" of governance are not literal locations, but rather arenas of governance within the broader structure of global governance in which actors interact and make decisions. "Modes" of governance are ways of crafting and implementing environmental regulations and initiatives – whether through the negotiation of treaties or the deployment of information in private-sector-led voluntary certification systems, which are designed to steer or change the behavior of relevant actors, from governments to firms to individuals (Rosenau 1995; Andonova et al. 2009).

We have already outlined the basic shape of state-led governance. The term "non-state governance" refers to a range of governance activities

[2] For examples of works that address this theme see Susskind 1994; VanDeveer 2003; Prins and Rayner 2007; and Victor 2011.

Box 1.1: Sites and Modes of Global Environmental Governance

1. Broadening Sites of Global Environmental Governance at the Global Level

Diplomatic Arena➔International Economic Arena➔Non–State Arena

- **State Led Governance:** Based on the primacy of international law and diplomacy and the negotiation of issue-based environmental regimes. Nation states are the lead actors. United Nations Environment Programme plays anchoring role, non-state actors are supporting players
- **International Economic Governance:** Lead actors include international economic organizations such as the World Trade Organization, the World Bank, and their member states. They exercise governance by coordinating capacity building and environmental aid, engaging in global conversations over the relationship between environment and development, and regulating and monitoring their own activities
- **Non-State Governance:** Lead actors are NGOs, corporations and other non-state actors who create, administer and maintain governance initiatives, such as certification systems or partnerships, often based on gathering and using information to steer behavior

2. Modes of Global Environmental Governance

- **International Cooperation:** The negotiation of commitments by nation states in a given issue area, often based on agreed targets and timetables. May include a threat of sanctions for non-compliance. Often contains capacity-building measures. International environmental governance as most people think of it.
- **Information Based Governance**: Gathering and using information to change or steer behavior of relevant actors, such as corporations. Most present in non-state governance initiatives, such as certification, but also in transparency mechanisms in state-led regimes. Can use formal (legal) or informal (normative or "shaming") means of enforcement
- **Market Mechanisms**: Global market mechanisms used by state and non-state actors to remedy market failures, e.g. by putting a price on carbon emissions or ecosystem services, allowing compensation for activities foregone or for buying and selling of emissions allowances They work by creating incentives for actors to meet goals, allowing them flexibility in decision-making

3. Deepening Sites: Global Environmental Governance across Scales

Global➔➔National ➔➔Local

- National influences on global processes, and global influences on national politics are well-understood: national interests shape

Box 1.1: (cont.)

international negotiations, while fulfilling international commitments involves political and policy changes at the domestic level

- Global-Local Connections are less well theorized and documented. Examples include regional centers under the chemicals regimes (global ➔ local), cities and subnational jurisdictions and climate change (local ➔ global), and knowledge, such as the take-up of local knowledge to the global level

created, implemented, and managed by non-state actors: civil society actors, such as NGOs, and private-sector actors – corporations and business associations – who may or may not work in partnership. In Chapter 7 we examine international transparency and certification regimes as leading examples of non-state governance. Given general disillusionment with the effectiveness of international environmental diplomacy, many activists, analysts, and members of the private sector have embraced these initiatives as a way to bypass the cumbersome process of international cooperation. Scholarly interest in these non-state regulatory regimes revolves around how they build authority and legitimacy, even while bypassing national governments – traditionally the sole holders of these governance properties (Cashore et al. 2004; Green 2014), and their ultimate effectiveness, especially given their voluntary nature.

Decisions and rules about trade, foreign investment and global capital movements, and development, particularly in an era of rapid globalization, have serious impacts on the state of the global environment. So, increasingly, forums such as the World Trade Organization (WTO) and the World Bank have had to take on issues of the environmental and social impacts of their decisions, and how to respond when their rules conflict with global rules and norms about environmental protection. Chapter 6 addresses these processes. Finally, and related to discourses of economic globalization, market mechanisms are increasingly used at national and now at global levels to create positive incentives and a degree of choice and flexibility for actors to meet global commitments, and to resolve market failures by creating prices and markets for environmental services and new "commodities" such as a tonne of carbon. Chapter 8 examines how this mode of governance, which differs from traditional "targets and timetables" approaches, has worked in global climate, biodiversity, and forests governance.

Box 1.1 depicts these sites and modes as processes, notably a broadening of sites, from the diplomatic arena out to economic and non-state arenas, and proliferation of modes of GEG. It also shows a deepening across scales