THE POLITICS OF CHOICE AND INSTITUTIONAL DEVELOPMENT IN GLOBAL ENVIRONMENTAL REGIMES

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ABSTRACT

What factors account for variation in institutional development in the direction of greater or lesser regime complexity? To answer this question, this dissertation develops a distributive historical theory that connects the micro-foundations of state choice to the macro-processes of institutional development. I argue that distributive conflict over the terms of cooperation in a regime provides dissatisfied states with incentives to pursue institutional change. Yet there are centripetal forces that can bias regime development towards the status quo. The ways in which these forces of change and stability interact result in variations of institutional development and regime complexity. From the distributive historical theory, I derive and test a set of hypotheses through cross-case analysis of the regimes constructed to address ozone depletion, the overfishing of global stocks, and climate change. Across the cases, I find that dissatisfied actors continuously contest the status quo institutional arrangements to gain distributive advantages. Still, regimes tend to develop in a strongly path-dependent manner because institutions are resistant to change and because the status quo beneficiaries employ strategies that blunt the impact of the dissatisfied actors' actions.

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CHAPTER 1

INTRODUCTION

The number of international institutions has increased significantly over the last three decades, changing the structures of global governance. This effect is particularly noticeable in the trade regime. States have increasingly pursued their trade agendas outside of the World Trade Organization by creating regional, limited multilateral, and bilateral agreements. This proliferation of preferential trade agreements has, in turn, enabled actors to forum shop.[1] Instead of turning to the WTO to resolve their trade disputes, for example, complainants can select from a number of options, choosing the one that will most likely yield their preferred outcome.[2] Other regimes have experienced similar developments. Until 1980, only the International Atomic Energy Agency and the Organization of the Petroleum Exporting Countries were involved in energy policy internationally. Today, an alphabet soup of acronyms – IEA, OLADE, IEF, ECT, IRENA, and IPEEC – populates the energy regime.[3]

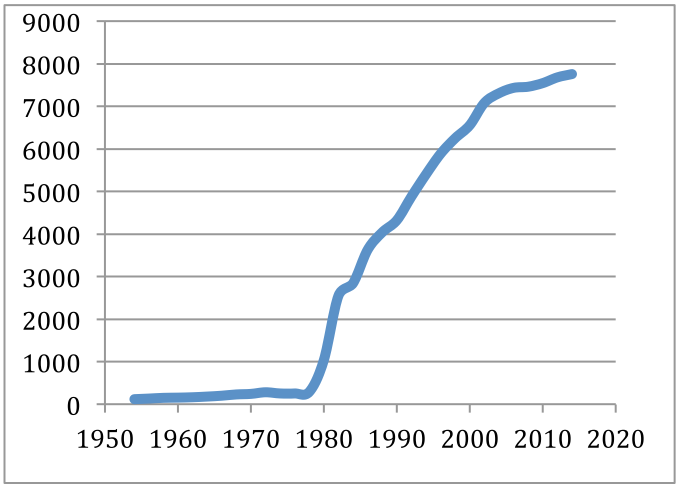
In addition to growing institutional density within particular issue areas, traditionally separate regimes have begun to overlap. When we imagine the human rights regime, we think of global United Nations conventions and regional agreements like the European Convention on Human Rights. Yet states have begun to insert human rights provisions into preferential trade agreements, which in turn are nested inside the WTO, blurring that image.[4] Similarly, until the 1990s, the international food security regime was centered around three UN agencies: the Food and Agriculture Organization, the

[1] See Alter and Meunier 2006; Dunoff 2007.
[2] See Busch 2007.
[3] Colgan, Keohane, and van de Graaf 2012.
[4] Hafner-Burton 2009.

World Food Program, and the International Fund for Agricultural Development. As a result of institutional proliferation, however, international trade and human rights institutions have now entered the food security governance space.[5]

As *Figure 1.1* demonstrates, the number of international organizations (IOs) has increased significantly since the 1970s. In addition to the 6955 active IOs operating in

Figure 1.1 Number of international organizations, 1954-2014



Source: Yearbook of International Relations

2013, hundreds of thousands of international treaties are registered with the United Nations. It is therefore fitting that scholars have begun to focus more on the growing incidences of forum shopping, institutional proliferation, and regime overlap. Many have reached the conclusion that these developments are indicative of a new phenomenon in the international system: the rise of regime complexes,[6] which are arrays of "partially overlapping institutions governing a particular issue-area, among which there is no agreed upon hierarchy."[7]

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[5] Margulis 2013.
[6] See Alter and Meunier 2009; Betts 2009; Colgan et al. 2012; Davis 2009; Drezner 2013; Keohane and Victor 2011; Kuyper 2013; Morse and Keohane 2013; Orsini, Morin, and Young 2013.
[7] Raustiala and Victor 2004, 277.

While it is undeniable that regime complexes and the behaviors associated with them have become more prevalent over time, there has been very little attention to negative cases; in the era of growing institutional density, there are still many international regimes that display little complexity. The following question therefore motivates this dissertation project: what factors account for variation in institutional development in the direction of greater or lesser regime complexity? The answer to this question has important implications for our understanding of state choice, regime development, and effective global governance.

This project puts forth a distributive historical theory of institutional development, in two steps. The first step emphasizes state choice in the context of distributive conflict. I argue that distributive conflict over the terms of cooperation in a regime provides dissatisfied states with incentives to pursue institutional change. These states can attempt to change the regime's existing institutions, forum shop to venues outside of the regime, and create new institutions. The second step engages with the insights of historical institutionalism, focusing on how international institutions mitigate the effects of states' choices. I argue that, while state strategies of forum shopping and proliferation can alter the institutional status quo, regime development is often strongly path-dependent. This is because existing institutions tend to be resistant to change, and because actors satisfied with the status quo will attempt to minimize the impact of the dissatisfied states' efforts. We must understand how these forces of change and stability interact with one another, generating various processes of institutional development, to explain why regimes develop in more or less complex ways.

In this dissertation, I formulate this distributive historical theory of institutional development, deriving and testing a set of hypotheses through cross-case analysis of the environmental regimes constructed to address ozone depletion, the overfishing of global stocks, and climate change. Case selection was based on a most-similar systems design. Because each of these issues is a global commons problem, the researcher can hold constant a number of possible explanatory factors, thereby increasing analytical leverage. The three cases, moreover, display considerable variation in the dependent variable of institutional development. The ozone regime is generally coherent and hierarchical, while the climate regime displays the characteristics of a regime complex. The fisheries regime falls in between. I employ process tracing to analyze the incremental ways in which state choices generated patterns of institutional development towards greater or lesser regime complexity.

Defining Institutional Development and Regime Complexity

The dependent variable in this dissertation is institutional development in the direction of greater or lesser regime complexity. "Institutional development" appears mostly in scholarship that is part of the historical institutionalist research agenda. While no universally accepted definition of the term exists, scholars tend to use it when exploring the origins, evolution, and change of political institutions over time.[8] Building on past literature, institutional development in this project refers to the creation and evolution over time of governing authority through international institutional arrangements.

[8] See Fioretos 2011, 392; Pierson 2000c, 475; Pierson and Skocpol 2002, 701; Thelen 1999, 396; Thelen and Steinmo 1992, 14.

I define and measure regime complexity as a function of three factors: institutional integration, norm conflict, and actor constellations. [9] First, complexity depends on the degree to which institutions are integrated in regards to their decision-making systems. Complexity is low in issue areas in which there is a core institution that provides an effective decision-making apparatus, which may also govern different but substantially integrated amendments and political processes. Conversely, complexity is high where various institutions are hardly connected and/or unrelated decision-making procedures exist. Second, the degree to which norms within the regime are complementary and compatible also matters. Complexity is high when institutions that have conflicting sets of principles, norms, and rules populate the issue area. Where institutions follow the same or complementary norms, complexity is low. Third, the integration of actor constellations also determines complexity. Complexity is low where the core institution in an issue area includes all relevant actors. It is high where institutions have different memberships and major actors support different institutions. In summary, regimes are least complex when decision-making processes are hierarchically integrated, norm conflict between institutions is low, and most relevant actors belong to and are supportive of the focal institution. Based on the definition, of the three environmental regimes examined in this project, the climate regime is most complex, the ozone regime is least complex, and the fisheries regime is in between.

Literature Review

Scholars have primarily utilized two international relations theoretical frameworks – a functionalist approach and a power-distributive approach – in explaining

[9] This definition follows Bierman et al. 2009.

the development of regime complexes. Functionalism explains outcomes by focusing on the efficiency-enhancing functions that institutions perform for those who create them.[10] For example, when states choose to cooperate through international organizations rather than through less institutionalized arrangements, it is because the centralization and independence of IOs allow them to facilitate negotiations, resolve disputes, implement agreements, and carry out a number of other functions.[11] This scholarship implies that particular institutional arrangements come about from the choices made by rational actors, who aim to enhance the efficiency of cooperation. Therefore, if regime complexes exist, it is because they provide cooperation-enhancing advantages in certain issue areas in ways that more centralized and hierarchical regimes cannot. For example, they may offer states greater flexibility as they attempt to cooperate on complex issues like climate change.[12]

The limitations of functionalist arguments are twofold. First, they tend to assume rather than empirically establish that states create institutions because of the functions they perform.[13] This line of reasoning implies that regime complexes exist because states choose to create them in an effort to make cooperation more efficient. Therefore, in the issue areas in which they are present, regime complexes present the most optimal structure for advancing cooperation. This conclusion has potentially significant policy implications. But what if functionality is not the primary driver behind institutional creation? Without analyzing institutional emergence, we cannot assess the extent to which the functionalist conclusion is empirically supported.

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[10] See Abbot 2000; Abbott and Snidal 1998; Keohane and Marin 1995; Mitchell 1994.
[11] Abbott and Snidal 1998.
[12] See Helfer 2004; Keohane and Victor 2011.
[13] See Pierson 2000, 477 for an elaboration of this critique. See Abbott and Snidal 1998; Gilligan 2004; Koremenos 2005; Rosendorff 2005 for examples.

Second, empirical evidence suggests that that states at times make institutional choices knowing that transaction costs will increase as a result.[14] The United States is notable for engaging in this behavior. To counter the Doha Declaration, an agreement reached by members of the World Trade Organization that allows states to relax intellectual property rights (IPR) provisions in the interest of public health, the US included strong IPR standards in its bilateral trade agreements. These new rules conflicted with the standards set by the WTO, reducing the clarity of legal obligations.[15] The US also engaged in serial bilateralism as a means of undermining the legal obligations imposed by the International Criminal Court (ICC).[16] In another example, Germany and a group of likeminded states created the International Renewable Energy Agency to counter the International Energy Agency, thereby contributing to the fragmentation of the international energy regime and raising the transaction costs of cooperation.[17] These examples are incompatible with the assumptions underlying functionalist explanations.

Scholars have also presented arguments derived from power-distributive approaches to explain the emergence of regime complexes. These assume that states are primarily concerned with the distributive implications of institutional arrangements, not with their efficiency. This literature pays close attention to power-dynamics within an issue area, for it accepts that the resources of powerful states allow them to re-shape the institutional landscape through the strategies of forum shopping and institutional

[14] See Benvenisti and Downs 2007, 599; Van de Graaf 2013, 30.
[15] See Drezner 2013; Helfer 2009, 42.
[16] Kelly 2007.
[17] Van de Graaf 2013.

proliferation.[18] The implications of power-distributive arguments are that regime complexes result form the actions of primarily powerful states, which deliberately change institutional arrangements in order to achieve more favorable distributive outcomes.[19]

Although power-distributive approaches present a compelling argument that connects state strategies to regime outcomes, they fail to consider how the constraints of existing institutional contexts can limit states' choices. Utilizing strategies that change the institutional landscape can have reputational costs, can undermine the actor's bargaining power in pre-existing institutions, and requires the consent and cooperation of other states, which may be satisfied with the status quo. In an oft-cited piece, for example, Benvenisti and Downs argue that as a result of institutional proliferation, powerful states can abandon any given institution that does not meet their preferences for another venue.[20] The authors miss the point, however, that multilateral institutions tend to be difficult to change. So while a state can abandon venue A for venue B, other members of venue B must consent to the policies that state is seeking. Australia, for example, refused to ratify the Kyoto Protocol and attempted to enact its preferred climate policies through the Asia-Pacific Economic Cooperation. Other members of APEC, who were sympathetic to the UN climate regime, blocked Australia's efforts. The dissatisfied state can also create a new institution, but for this strategy to be effective, other states must join it. If the majority of states are satisfied with venue A, they are unlikely to do so. We can return to the ICC example for an illustration. The US pressured most of the world's countries to

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[18] Drezner 2013, 288; Schneider and Urpelainen 2013; Jupille, Mattli, and Snidal 2013, 44; Shaffer and Pollack 2010, 745.
[19] See Drezner 2013; Benvenisti and Downs 2007; Colgan et al. 2012; Schneider and Urpelainen 2013.
[20] Benvenisti and Downs 2007, 597.

sign bilateral agreements inconsistent with their commitments under the ICC, but many simply refused.[21]

A Distributive Historical Theory of Institutional Development

The distributive historical framework offered here explains the ways in which states' choices trigger patterns of institutional development that lead to variations in regime complexity. It assumes that status quo dissatisfaction, which stems from the material impact of rules that guide cooperation in a given regime, serves as the trigger for institutional change. Dissatisfied actors seeking distributive advantages will attempt to change the institutional status quo. Their first preference will be to change existing institutions within the regime, since this is the least costly option. If this strategy proves unsuccessful, the dissatisfied can forum shop in an attempt to create new rules on the given issue in institutions outside of the regime. They can also engage in institutional proliferation, establishing new institutions to address the issue.

Pre-existing institutions will, however, limit the extent to which the dissatisfied can achieve change that deviates significantly from the status quo. This is especially the case in regimes with an existing focal institution that has large set-up costs, generates network effects, and provides institutional benefits. These three factors induce path-dependent regime development, meaning that institutional change is bounded and radical divergence from the path set up by the institutional status quo becomes unlikely.[22] Set-up costs are the investments of resources necessary to establish an institution. Network effects are the benefits derived from linkages and cooperation between institutions.

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[21] Kelley 2007.

[22] Scholars disagree on a precise definition of path-dependence. For a discussion on various definitions of the term, see Mahoney and Schensul 2006.

Institutional benefits refer to material payoffs states receive as a result of their membership. High set-up costs, institutional benefits, and network effects incentivize states to protect the status quo. If actors forum shop and proliferate in their pursuit of distributive gains, those satisfied with the status quo can block their efforts in pre-existing institutions and can refuse to join newly creates ones. Through these actions, they limit the severity of institutional change towards greater complexity.

Of course, even within the bounds of path dependence, change happens as actors continuously contest the status quo. To assess the effects change has on broader regime development, we must distinguish between its various manifestations.[23] Patterns of institutional change in international politics can take one of three forms: displacement, layering, and conversion.[24] Displacement is the slow replacement of existing institutions through the introduction of competing arrangements. It occurs as a result of institutional proliferation and contributes most towards regime complexity. Layering entails the adaptive addition of new institutions on top of pre-existing arrangements through institutional change and proliferation. It contributes moderately to complexity. Conversion occurs when institutions remain formally the same but are redirected towards new goals through soft laws or minor adjustments. It contributes least to complexity.

Three independent variables, I hypothesize, determine patterns of institutional development: the intensity of distributive conflict, institutional inertia, and the size of coalition of the dissatisfied. The intensity of distributive conflict refers to the material stakes that are implicated by the particular issue. Institutional inertia depends on the

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[23] See Mahoney and Thelen 2010; Streeck and Thelen 2005; Thelen 2000, 2003, 2004.

[24] This follows Mahoney and Thelen 2010. A fourth mode of change the authors identify, drift, occurs when rules remain unchanged but shifts in the external environment alter their impact. Because I have not come across examples of drift in regards to international institutional development, it is not considered in this dissertation.

number of veto players in pre-existing institutions in the regime. These individuals or collective actors whose agreement is necessary for institutional change to occur are determined by formal and informal decision-making procedures. The size of the coalition of the dissatisfied refers to the number and resources of states seeking institutional change. These three factors interact with one another, combining in ways that lead to different patterns of institutional development.

High intensity distributive conflict is likely to yield displacement, regardless of the values of the other two variables. Where the distributive stakes are high, the interests of dissatisfied actors are likely to diverge.[25] Additionally, actors are motivated to bargain harder.[26] Therefore, even in cases where the size of the coalition is large and institutional inertia is low, the dissatisfied are unlikely to be able to converge around a single institutional response. Unable to formally change the regime's institution(s) and finding the high stakes status quo costly, the dissatisfied have an incentive to pursue institutional creation that disrupts the status quo through displacement. The dissatisfied are also likely to engage in forum shopping in an attempt to create new rules in existing institutions outside of the regime. But again, because of the high stakes distributive conflict, other states will block their efforts. The dissatisfied may succeed in achieving minor changes that result in the conversion of institutions outside of the regime.

Where the stakes of distributive conflict are low, dissatisfied states are less likely to attempt to displace existing institutions, since such action is costly. Under such conditions, the coalition is more likely to be able to coalesce around an agreed upon institutional choice. The resulting pattern of change will depend on the size of the

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[25] See Colgan, Keohane, and Van de Graaf 2011, 118; Keohane and Victor 2011, 8-9; Schneider and Urpelainen 2013.

[26] Fearon 1998, fn. 36.

coalition relative to institutional inertia. If the coalition is large enough, it will "nest" new rules within the regime's existing institution(s) in a hierarchical fashion. This nested layering will affect regime complexity minimally. If institutional inertia is so high that veto actors can block the coalition, the latter will create a new institution, layering it overtop others in the regime. The dissatisfied may also pursue institutional change in venues outside of the regime by forum shopping, which can lead to conversion. Overlapping layering and conversion will affect regime complexity modestly.

Research Design

I conduct three case studies to assess the above-outlined expectations derived from the distributive historical theory. As indicated earlier in the chapter, current research on regime complexity suffers from selection bias. Many, indeed most, scholars have studied issue-areas in which complexity is known to exist,[27] the majority of them focusing on "trade-and" problems,[28] and drawn general conclusions about state behavior and institutional development from them. This approach limits analytical leverage and leaves us uncertain about the extent to which the findings are generalizable. In this dissertation, I apply a most-similar systems design, choosing cases that are as similar as possible in all respects but vary in the development of regime complexity.[29] Because I choose three global commons problems, the findings in this dissertation are most likely to apply to issues centered on the provision of global public goods.

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[27] See Raustiala and Victor 2004; Alter and Meunier 2006; Helfer 2009; Busch 2007; Kelley 2009; Betts 2009; Hofman 2009; Hafner-Burton 2009; Davis 2009; Keohane and Victor 2011; Dunoff 2007; and Pauwelyn and Salles 2009.
[28] Leebron 2002 discusses the expansion of "trade and" issues, which are issues whose norms affect trade or which are themselves affected by trade flows. For case studies, see Alter and Meunier 2006; Helfer 2004; Busch 2007; Davis 2009; Dunoff 2007; Pauwelyn and Salles 2009.
[29] Gerring 2008, 668; Mahoney and Goertz 2004, 664-665.

I analyze institutional development in the ozone, fisheries, and climate regimes. The ozone problem gained international attention in the early 1970s, as scientists discovered that commonly used chemicals were causing depletion of the ozone layer. In response, states created a framework convention and the Montreal Protocol on Substances that Deplete the Ozone Layer in the 1980s. The ozone regime is hierarchically constructed around these institutions today. The international community became aware that overfishing was depleting global stocks in the 1950s. The Law of the Sea Convention, adopted in 1982 and in force since 1994, is at the center of the global fisheries regime, which has grown moderately more complex over time. Policymakers first recognized climate change as a problem that required a global response in the 1980s. Following the example set in the ozone regime, they created a framework convention and the 1997 Kyoto Protocol that set targets for the reduction of greenhouse gases by industrialized states. Since the Kyoto Protocol entered into force in 2005, the climate regime has experienced the most significant movement towards greater complexity.

In each case, I take as a starting point the emergence of the policy problem and utilize process tracing to determine how the relevant institutional arrangements – whether highly centralized around a focal institution or complex and fragmented – develop over time. Process tracing relies on the collection of observations that are based on in-depth case study knowledge and provide insight about context, processes, or mechanisms.[30] It requires careful description that analyzes the trajectories of change.[31] In each case, I analyze the ways in which a focal institution, once selected, distributes the costs and benefits of cooperation and provides incentives to actors to either protect the status quo or

[30] Mahoney 2010, 124.
[31] Bennett and Checkel 2014; Collier 2011, 823.

seek institutional change. I then assess important actors' institutional choices and the ways in which these shape patterns of development towards greater or lesser complexity.

Preview of Chapters and Findings

This dissertation consists of six chapters. Following this introduction, chapter 2 presents an overview of the central research question, a literature review, and the theoretical model. I first synthesize two strands of scholarship, power-distributive and historical institutionalist, to describe the ways in which states' institutional choices translate into pathways of institutional development towards lesser or greater regime complexity. The pathways, as previously identified, are layering, displacement, and conversion. The chapter includes a detailed examination of past literature on regime complexes, including functionalist and power-distributive approaches. I then build on the insights of power-distributive approaches and historical institutionalism to present a distributive historical theory of institutional development. The chapter concludes with the research design, in which I justify the case selection, method of analysis, and operationalize the independent variables, processes of institutional development, and regime complexity.

The ozone regime examined in chapter 3 has been defined by low-intensity distributive conflict, low institutional inertia, and a large coalition of the dissatisfied. Nested layering is the expected pattern of institutional development derived from the theory, and the findings in the case are supportive of this expectation. The ozone regime has maintained low levels of complexity over time. The bargains struck during the creation of the regime's focal institutions are key to explaining this outcome.

Industrialized states, as the largest producers and consumers of ozone-depleting substances, moved first domestically by implementing regulations and then establishing a framework convention and the Montreal Protocol, which entailed international regulations of ozone-depleting substances (ODS). To protect their producers who had to pay the costs of phasing out ODS and developing alternatives and to ensure the effectiveness of regulations, industrialized states needed to secure the cooperation of developing countries. ODS production and use of was projected to climb significantly in the developing world. To secure the participation of developing states, industrialized countries agreed to finance the Multilateral Fund, on which developing states can draw for financial and technical assistance. In return, developing states accepted the global controls sought by industrialized countries, which provided the latter with economic and environmental benefits. This means that institutional benefits are broad and reach all important actors, incentivizing them to refrain from forum shopping or proliferation behaviors that would create greater complexity.

Table 1.1 Summary of Cases

	Focal Institution (in force)	**Independent Variables**			**Development Processes**	**Select Institutions**	**Outcome**
		DC	**II**	**CD**			
Ozone	Vienna Convention (1988)	↓	↓	↑	Nested Layering	London Amendment Copenhagen Amendment Montreal Amendment Beijing Amendment	Lesser complexity
Fisheries	Law of the Sea Convention (1994)	↓	↑	↑	Overlapping layering	Fish Stocks Agreement Code of Conduct	Modest complexity
					Conversion	CITES Convention on Biological Diversity	
Climate	Framework Convention on Climate Change (1994)	↑	↑	↓	Displacement	Asia Pacific Partnership Major Emitters Forum	Greater complexity
					Overlapping layering	Bilateral Agreements	
					Conversion	G8 APEC	

The regime has evolved since those founding moments, with status quo dissatisfaction serving as the driver for institutional change. Developing states have had to bargain for the replenishment of the fund, which expires every three years. To maintain the economic advantage of their chemicals industries, industrialized states have had to pursue stricter international controls to match those in place domestically. Due to the low-intensity distributive conflict, the latter have been able to provide the financial incentives necessary to secure the continued cooperation of the former and both groups have been able to agree on a path forward for the regime. The dissatisfied, consisting of a large coalition of developing and industrialized states, have been able to achieve change within the focal institution due to its low inertia. The process of nested layering that has resulted from the adoption of four amendments to the Montreal Protocol has generated little complexity.

The fisheries regime examined in chapter 4 has been defined by low-intensity distributive conflict, low institutional inertia, and a small coalition of the dissatisfied. The patterns of change this combination of independent variables is expected to result in are overlapping layering and conversion. The analysis yields findings consistent with this expectation. Since its fisheries provisions were accepted in the mid-1970s, the global fisheries regime has grown moderately more complex. Once again, the creation of the focal institution, the Law of the Sea Convention, significantly shaped subsequent regime development. The LOSC created exclusive economic zones (EEZ), which lowered the extent of distributive conflict by granting states the right to the natural resources within 200-miles of their coastlines. Due to its enclosure of the majority of the world's fishing stocks, the LOSC provides broad institutional benefits, rendering its status at the center of the fisheries regime immune to serious challenges.

Dissatisfaction over the LOSC's provisions on stocks that straddle one or more EEZs and migrate to the high seas has served as a trigger for institutional change. Coastal states seeking an expansion of sovereignty over these stocks have formed the coalition of the dissatisfied. Due to the small size of the coalition, the dissatisfied have been unable to change the LOSC, even though the institution is marked by low institutional inertia. As a result, they have forum shopped to institutions outside of the regime, including the Convention on Biological Diversity and Convention on International Trade in Endangered species, where their efforts have resulted in conversion. The dissatisfied have also created new institutions outside of the LOSC, which has led to overlapping layering. These processes of change have modestly increased complexity over time.

The climate regime in chapter 5 has been marked by high intensity distributive conflict, high institutional inertia, and a small coalition of the dissatisfied. Displacement and conversion are the expected patterns of institutional change. While the findings support this expectation, the case also yielded unexpected developments. As in the ozone case, states responded to the problem of climate change by creating a UN framework convention and subsequent Kyoto Protocol, which sets greenhouse gas emissions limits for industrialized countries. A small but powerful coalition has been dissatisfied with the terms of the treaty, but has been unable to achieve change through existing climate institutions due to a high degree of institutional inertia. Due to the high intensity of distributive conflict, the dissatisfied have attempted to displace Kyoto through institutional proliferation and forum shopping. The latter has resulted in conversion.

Displacement and conversion in the climate regime have generated significant complexity.

Other developments in the climate case are not, however, consistent with the distributive historical theory. The process of overlapping layering also occurred as the status quo defenders engaged in what I call regime-supporting proliferation in their attempt to shore up third-party support for the regime. European countries and China, for example, created a number of bilateral agreements that were compatible with the UN process but not nested within the UN climate institutions. The status quo powers forum shopped for the same reasons, placing climate discussions on the agendas of the G8 and the UN Security Council, thereby contributing to the conversion of institutions outside of the regime. Additionally, new developments suggest that the climate regime may be re-centering around the UN institutions, which is not consistent with the expectations. This development suggests that focal institutions exert a centripetal pull even in unlikely circumstances.

In chapter 6, I review these findings and discuss their contributions to scholarship. I make three major claims. First, the findings enhance our understanding of institutional choice. Evidence supports the assertion that distributive considerations are the primary forces driving states' institutional decision-making. It shows that while the powerful do engage more frequently in institutional proliferation, developing states are adept at using forum shopping to drive outcomes. Second, the findings show that although states often deploy strategies that push towards greater complexity, existing institutions serve as a check on those centrifugal forces. This suggests that extent of institutional change and the growth of regime complexity may not be severe as existing literature indicates. Third, because change is gradual and bounded, we can temper our concerns about the normative impact of regime complexity. The case study analysis yields little indication that growing institutional proliferation and density are diluting legal obligations and abetting the further empowerment of powerful actors.

The findings have policy implications. Effective governance of the global commons as well as the provision of other public goods requires wide participation; stable and adaptive focal institutions are therefore essential. Policymakers must design institutions that incentivize states' participation and support. This requires, first, the most powerful actors to coalesce around a common choice. Second, especially where the intensity of distributive conflict is high, focal institutions must provide tangible material benefits for members. In this sense, recent developments in the climate regime are encouraging. Although the Paris Agreement has disappointed environmental activists, it represents for the first time an agreement supported by the major powers. That support will likely limit further fragmentation and encourage the institutional strengthening of the global climate regime. In the next step, the fulfillment of pledges to the Green Climate Fund will be essential to securing effective action on climate change. The following chapter lays out the theoretical model that explains why factors like these are key to the development of international regimes.

CHAPTER 2

A THEORY OF INSTITUTIONAL CHOICE AND DEVELOPMENT

With the number of international treaties and organizations increasing each year, the international system is constantly evolving. This development has inspired scholarship within international relations and international law that examines the choices states pursue when multiple institutional options are available to them, as well as the implications of growing institutional density. Yet our knowledge of why institutional arrangements within this shifting environment take particular forms and how they develop over time is surprisingly limited. This dissertation makes the crucial connection by linking the micro-foundations of state choice to the macro-processes of institutional development. In so doing, it presents a theory of international political development that explores broad patterns of institutional emergence, stability, and change as they relate to regime complexes.

Why regime complexes? These arrangements, defined generally as loosely connected, nonhierarchical sets of institutions governing an issue area, have preoccupied many scholars who explore the consequences of an institutionally dense international system. The impression the literature gives is that regime complexes are not just becoming more prevalent, but may be overtaking traditionally self-contained, hierarchical regimes as the new standard. Yet, scholars have not systematically explored the extent to which regime complexes are representative of the greater universe of institutional arrangements in the international system. Among global environmental regimes, some do indeed display the characteristics associated with complexity, while others are traditionally hierarchical, and many are somewhere in-between. What explains such variation in regime complexity? This dissertation seeks to explain not just the end-point of regime complexes, but rather the pathways of institutional development that lead to greater or lesser regime complexity. It develops a distributive historical argument about institutional choice and development and tests it on three environmental cases: ozone depletion, climate change, and fisheries management.

The distributive historical approach presented in this chapter argues that in many cases, the establishment of a regime's core institutions sets in motion path-dependent institutional development that limits the extent of institutional change. Institutions that generate network effects, provide material benefits to at least some members, and which required significant investments incentivize states to protect their position. This creates a substantial status quo bias. Regimes, of course, are never in state of stasis. There are always actors who, dissatisfied with the material implications of the status quo, seek to alter it. But pre-existing institutional arrangements shape and constrain their choices and subsequent patterns of institutional development through three independent variables: institutional inertia, the intensity of distributive conflict, and the size of the coalition of the dissatisfied.

When change does occur, what does it look like? The three factors combine in various ways to produce three patterns of incremental institutional change: conversion, layering, and displacement. Conversion is the repurposing of existing institutions for new functions without formally changing them. Layering entails the addition of new institutions on top of existing ones in a generally complementary fashion. Displacement is the creation of new institutions with the intent of replacing existing ones. Of these patterns of change, displacement has the greatest capacity to generate greater complexity, but because of the inherent status quo bias created by existing institutions, it is difficult to achieve.

The present chapter is organized around four main sections. The first provides an overview of the literature on institutional density, fragmentation, and regime complexes, identifying institutional development towards greater or lesser regime complexity as the dependent variable in this project. It then synthesizes two strands of scholarship to describe the ways in which states' institutional choices translate into pathways of institutional development towards lesser or greater regime complexity. The pathways, as previously identified, are displacement, layering, and conversion. The second section reviews functionalist and power-distributive scholarship that has explored institutional choice and regime complexes, arguing that these have fallen short in explaining the processes through which regime complexes and alternative institutional arrangements develop. Section three argues first, that institutional choice and complexity scholarship would benefit from engaging with historical institutionalism, particularly as it relates to the concept of path dependence. It then presents a distributive historical theory of institutional development and regime complexes, which highlights the ways in which existing institutional arrangements shape actor strategies, patterns of development, and outcomes in the context of distributive conflict. The chapter concludes with the research design that is applied to the case studies of the dissertation.

Institutional Density: Origins and Consequences

Within the field of international relations, Raustiala and Victor were among the first to identify one of the consequences of institutional density: the emergence of regime complexes. They define these arrangements as "partially overlapping and nonhierarchical institutions governing a particular issue area," composed of instruments in which different sets of actors participate.[32] The literature that has followed Raustiala and Victor's contribution gives the impression that regime complexes are fairly prevalent. Most of the attention has focused on so-called "trade-and" issues,[33] but scholars have also identified institutional arrangements that resemble regime complexes in the issue areas of human rights,[34] intellectual property rights,[35] energy security,[36] food security,[37] and the environment.[38] The conclusions from this literature are twofold. First, there is an emerging consensus that because of the non-hierarchical nature of the international legal system, the proliferation of institutions can lead to legal inconsistencies or normative conflicts across regimes.[39] Second, the expansion of institutional choices and their overlapping jurisdictions has led to forum shopping,[40] which is the act of seeking out alternative, potentially more sympathetic venues through which to pursue one's preferred outcomes.[41] Morse and Keohane suggest that regime complexes and the strategies associated with them reflect the new standard in international cooperation, which they call "contested multilateralism."[42]

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[32] Raustiala and Victor 2004, 279.
[33] Leebron 2002 discusses the expansion of "trade-and" issues, which are issues whose norms affect trade or which are themselves affected by trade flows. For case studies, see Alter and Meunier 2006; Busch 2007; Davis 2009; Dunoff 2007; Pauwelyn and Salles 2009.
[34] Hafner-Burton 2009; Teitel and Howse 2009.
[35] Helfer 2004.
[36] Colgan, Keohane, and Van de Graaf 2011; Van de Graaf 2013.
[37] Margulis 2013.
[38] Keohane and Victor 2011.
[39] Alter and Meunier 2009; Drezner 2013; Raustiala and Victor 2004.
[40] Alter and Meunier 2006; Busch 2007; Hafner-Burton 2009; Helfer 1999.
[41] This definition subsumes what Helfer 2004, 6-8; 2009, 39; and Morse and Keohane 2014, 392 refer to regime shifting, which involves a longer-term strategy that aims at producing counter-regime norms.
[42] Morse and Keohane 2014.

International law scholars have been concerned with a related consequence of institutional density: legal fragmentation. As early as the 1980s, Weil made note of the increase of (often vague) norms, whose introduction into the legal order he speculated diminished the quality and effectiveness of the international legal system.[43] The United Nations' International Law Commission addressed this point more recently in its report on the "difficulties arising from the diversification and expansion of international law." The report notes that the once general system of international law has become more specialized, with specific systems such as trade law, human rights law, environmental law, law of the seas, European law, and others emerging over time. This development has created a problem for the legal order because specialized law-making and institution-building often occur independently of legislative and institutional activities in the adjoining fields. This creates conflicts between rules, diverging institutional practices, and possibly even leads to "the loss of an overall perspective on the law."[44] Successive presidents of the International Court of Justice have also voiced concern about the emerging prospect of forum shopping and its potential to generate confusion and weaken international law's role in guiding interstate relations.[45]

Much has been written about the growth of institutional density and its consequences. We know that the international legal order has become more fragmented, that regime complexes exist with respect to various issues, and that states take advantage of their consequent ability to forum shop. Still, the source of these changes and therefore our understanding of why these developments have occurred is limited. In a sense, the

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[43] Weil 1983.
[44] International Law Commission 2006, 11.
[45] Koskenniemi and Leino 2002. For perspectives that see institutional density as a positive development for the international legal order, see Kuyper 2014; Pauwelyn 2004.

literature has been as fragmented as the international system it describes, examining particular issue areas, behaviors, and outcomes, without systematically analyzing how these factors relate to each other and drive developments in the international system. This project therefore improves on past contributions by examining the pathways through which states' institutional choices result in variations of regime complexity.

To define regime complexity, this chapter draws on Biermann et al, who argue that we can differentiate between degrees of complexity, viewed in relative terms, by taking into account three factors: institutional integration, norm conflict, and actor constellations. First, complexity depends on the degree of institutional integration and overlaps between decision-making systems. In issue areas where there exists a core institution that provides an effective decision-making apparatus, which may also govern different but substantially integrated amendments and political processes, fragmentation is low. Where institutions are hardly connected and/or have unrelated decision-making procedures, complexity is high. Second, the existence and degree of norm conflicts are also a factor. When institutions that have conflicting sets of principles, norms, and rules populate and issue area, complexity is high. Where institutions follow the same or complementary norms, complexity is low. Finally, actor constellations are also relevant. Complexity is low where the core institution in an issue area includes all relevant actors. It is high where institutions have different memberships and major actors support different institutions.[46] In summary, regimes are least complex when decision-making is hierarchically integrated, there are low levels of norm conflict, and most relevant actors belong to and are supportive of the focal institution.

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[46] Bierman et al. 2009.

Table 2.1: Dimensions of Regime Complexity

	Low Complexity	**High Complexity**
Institutional Integration	Focal institution has monopoly over governance, decision-making	Governance, decision-making dispersed across unrelated institutions
Norm Conflict	Institutions governing issue share compatible rules, norms	Institutions governing issue have conflicting rules, norms
Actor Constellations	Relevant actors are members of, support focal institution or same set of institutions	Relevant actors are members of, support disparate institutions

The regime governing ozone-depleting substances presents an example of low complexity. The 1985 Vienna Convention, its 1987 Montreal Protocol on Substances that Deplete the Ozone Layer, and the subsequent amendments are integrated under one umbrella, it has nearly universal membership, and there are no significant institutions on the ozone issue outside of this framework. The regime governing access to plant genetic resources, on the other hand, has high complexity. The Convention on Biological Diversity (CBD), the TRIPS Agreement, and other institutions regulate the issue but feature competing norms. TRIPS seeks to strengthen intellectual property rights, while the CBD proclaims genetic resources to be sovereign property. Generally, developed states promote the forms of the former, while developing states promote the latter.[47]

What are the processes through which regime complexes develop? The literature mostly consists of case studies that take as a starting point institutional arrangements that display the characteristics of regime complexes and describe how behaviors of forum shopping and institutional proliferation led to these outcomes.[48] As Jupille, Mattli, and

[47] For a discussion of the plant genetic resource regime complex, see Raustiala and Victor 2004.
[48] See Alter and Meunier 2006; Drezner 2013; Helfer 2004; Keohane and Victor 2011. For an exception, see Colgan, Keohane, and Van de Graaf 2011.

Snidal[49] show, these are just two among a number of institutional choices states can make. When a new cooperation problem emerges, the authors argue, actors make one of four choices: *use, selection, change, and creation*. They can *use* an available default institution. For example, states usually turn to the World Health Organization when a new global health threat emerges. When two or more institutional options are available, states turn to *selection*, which the authors compare to the concept of forum shopping. The *change* option requires significant modifications to an existing institution, such as the expansion of its membership or substantive scope. This may correspond to what some have termed "regime shifting," a more long-term strategy than forum shopping, which aims at producing counter-regime norms.[50] Finally, *creation* entails the establishment of a wholly new institution[51] and is equivalent to proliferation in the regime complex literature. This can include the establishment of bilateral, regional, small multilateral, or open-invitation global institutions.

The process of choosing an institution is rather diverse and dynamic, with sets of actors often making a number of choices in response to a single problem over some period of time. Indeed, JMS acknowledge that in practice, the choices they outline overlap.[52] Some states may act in a focal institution, some may address the issue in a different institution, some may create a new institution, and some may dabble in each. Depending on the combination of choices and their deployment, the role that particular institutions play in the context of a regime can vary over time as their relevance and support can wax and wane. The whole regime may evolve in a variety of ways – perhaps

[49] Hereafter JMS.
[50] See Helfer 2004, 6-8; 2009, 39 and Morse and Keohane 2014, 392.
[51] Jupille, Mattli, and Snidal 2013, 28-30.
[52] Jupille, Snidal, and Mattli 2013, 30.

towards greater regime complexity, perhaps not. It is therefore important to assess not just institutional choice at one point in time but the processes of institutional change as they develop over a longer period.

For this reason, this dissertation project takes as a starting point the emergence of a particular policy problem and then analyzes how the relevant institutional arrangements – whether highly centralized around a focal institution or complex and fragmented – develop over time. Scholarship in the historical institutionalist research agenda is helpful here, for it has emphasized the importance of identifying the processes that shape institutional change. Much of this literature was a reaction to the prevalent use of path dependence to explain institutional stability. Kathleen Thelen in particular, along with co-

Table 2.2: Institutional choices as they translate to processes of change and regime complexity

	Nested Layering	**Overlapping Layering**	**Displacement**	**Conversion**
Institutional choice	Change	Change Creation Proliferation	Change Creation Proliferation	Informal change Redirection
Dimensions of complexity affected	Norm conflict Actor constellations	Norm Conflict Institutional integration Actor constellations	Norm conflict Institutional integration Actor constellations	Actor constellations

authors, argues that institutional resilience depends not just on positive feedback but also on accommodation to new actors and circumstances. She further claims that scholars have paid insufficient attention to gradual processes of institutional change that can, over time, lead to significant transformations.[53] Three types of change this literature identifies

[53] Mahoney and Thelen 2010; Streeck and Thelen 2005; Thelen 2000, 2003, 2004.

are layering, displacement, and conversion.[54] Although these have thus far been applied primarily to developments in domestic political systems, with some adjustments, they can be adapted for the international system in ways that incorporate the institutional choices laid out in the IR literature.

Conversion occurs when states redirect an institution towards new goals or functions without making any formal changes or additions to it.[55] When states want to address an issue through an institution, they must engage in a *selection* process. This process can be succinct, entailing broad agreement among actors that a particular institution is the most appropriate for the issue. Alternatively, it can involve forum shopping by any number of actors across time. What happens once an institution is selected? Oftentimes, when one or a number of states bring a new issue to an existing institution, no formal changes take place because shifting discussions of an issue to a venue is much easier than overcoming the institutional hurdles necessary to create new rules within it. The end result, if any change takes place at all, is therefore merely the adoption of a work program, declaration, or other kinds of soft law instruments that are low on obligation, precision, and delegation.[56] For example, Australia found itself dissatisfied with the UN climate regime and wanted to address the issue through alternative institutions. It selected the Asia-Pacific Economic Cooperation for this purpose. After Australia placed the issue on APEC's agenda, the institution declared its commitment to addressing climate change, established a Climate Center, made

[54] A fourth mode of change, drift, occurs when rules remain unchanged but shifts in the external environment alter their impact. See Mahoney and Thelen 2010, 16. Because I have not come across examples of drift in regards to international institutional development, it will not be considered in the discussion that follows.
[55] Mahoney and Thelen 17-18; Thelen 2003, 228.
[56] See Abbott and Snidal 2000 for a discussion on the distinction between hard and soft law.

aspirational goals, and promoted cooperation on climate research among members. Yet its members did not modify the structure of APEC in any significant way, nor did they adopt any formal instruments related to climate policy. Therefore, the result of Australia's forum shopping was conversion: the redirecting, without formal changes, of an economic organization towards climate change cooperation.

The regime complex literature generally paints forum shopping as an act that greatly contributes to complexity. Yet more often than not, forum shopping merely leads to conversion, which does not significantly alter the status quo. Since it does not entail the creation of formal rules,[57] conversion does not much affect norm conflict or institutional integration. The process may change actor constellations by drawing some support away form the focal institution, but is unlikely to alter membership patterns. For these reasons, conversion does not generate much complexity in a regime.

Layering occurs when actors add new institutions on top of existing ones by making revisions, amendments, or other additions. Actors may be motivated by wanting to replace preexisting institutions, either by dismantling them or setting up an alternative, but find themselves unable to do so.[58] Alternatively, they may prefer the old arrangements to stay in place.[59] Importantly, the additions "accommodate and in many ways adapt to the logic of the preexisting system."[60] The purpose of the new institutions is not to replace pre-existing ones but to change the way old rules structure behavior. In practice, layering can include both the nesting of new institutions as well as the overlapping new institutions over pre-existing ones. "Nesting" entails the addition of new

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[57] Mahoney and Thelen 2003, 15.
[58] Hacker 2004, 248; Mahoney and Thelen 2010, 16-17; Schickler 2001, 15-16.
[59] Schickler 2001, 15.
[60] Thelen 2003, 226.

arrangements that have a "high degree of conformity" and are hierarchically arranged within a broader set of institutions.[61] An example of this kind of layering is the establishment of the Kyoto Protocol to the UNFCCC. This would constitute as *change* under the JMS framework. "Overlapping" occurs when institutions have authority over an issue without being subsidiary to one another.[62] For an illustration, we can think of the many bilateral treaties on climate change cooperation. Some are made by supporters of the UN process and are meant to complement it. Others are created by opponents, and while not established as an explicit alternative to the focal institution, the intention was to create some tension within the regime. Neither of the two types of arrangements is formally under the FCCC umbrella; rather, they are layered over the framework. The addition of these treaties would fall under institutional *creation* in the JMS framework and is often referred to as proliferation in the regime complex literature.

Because layering involves adapting to the system established by pre-existing institutions, we can expect it overall to contribute only moderately to regime complexity. Still, there are important variations between nested and overlapping layering. The nesting of additions within an existing focal institution can lead to minor norm conflict if the new rules are not wholly consistent with old ones. Nesting can also affect actor constellations if part of the membership of the focal institution does not accede to the new rules. Institutional integration, however, remains unaffected. Yet new overlapping institutions do introduce additional decision-making procedures, and may also lead to changing actor constellations and the introduction of some norm conflict. Therefore, overlapping layering has the potential to generate greater complexity than nested layering.

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[61] Aggarwal 1998, 27.
[62] Alter and Meunier 2006, 363.

Mahoney and Thelen describe the final mode of change, displacement, as occurring when new institutions replace existing ones. Although this can happen suddenly when old institutions break down, more often it is a gradual process during which actors create new institutions that compete with older ones.[63] This definition must be modified for the present purposes because within international relations, the end-point of displacement – the removal of old structures – does not occur outside of rare moments during which the international order experiences a transformation. But the slow-moving process Mahoney and Thelen describe of actors attempting to dismantle existing institutions by enticing others to defect to new, competing institutions they create is much more common.[64] Those dissatisfied with the focal institution can do this either through institutional *creation* or *change*. The United States government opted for the former in its attempt to undermine the FCCC climate change process and the Kyoto Protocol. The US created a number of small multilateral institutions that it hoped important global actors would join and eventually prefer to the UN process.[65] An example of displacement through *change* occurred when countries dissatisfied with the World Trade Organization's rules on genetically modified organisms (GMOs) pushed for the creation of the Cartagena Protocol to the Convention on Biodiversity, hoping the Protocol would become the primary instrument through which trade in GMOs was regulated.[66] Because it entails the creation of conflicting norms at an institution not nested within the focal institution, displacement has a great potential to generate relatively high complexity. Still,

[63] Mahoney and Thelen 2010, 16.
[64] Mahoney and Thelen 2010, 16.
[65] See Morse and Keohane 2014 for other examples of what they refer to as "competitive regime creation."
[66] Note that this case also entails the choice of *selection*, since states engaged in forum shopping before achieving *change*.

the extent to which it does so depends on how successful the agents of change are at enticing others to defect and support the new rules.

In reality, the line between layering and displacement can become somewhat blurry, since institutions intended to displace can over time adapt to conform to the preexisting structures, thereby resulting in layering. To distinguish between the two, it is therefore important to identify not only the intentions of the agents of change (do they seek to displace the existing regime?) but also the outcomes of their actions (do they achieve norm conflict and the defection of others to competing institutions?).

Sources of Institutional Change

We now know the options available to states when they act through international institutions, and how those choices translate into patterns of institutional change. Yet what factors drive those choices and subsequent institutional development? Functionalist and power-distributive theoretical frameworks have informed much of the scholarship that has heretofore examined how state choices contribute to and operate in the context of more complex international regimes. These theories offer important insights about the nature of institutions. But because the former looks primarily at outcomes and the latter at strategies, their explanations of institutional emergence and regime complexity are not fully satisfying. Crucially, they lack an account of the processes that over time give rise to regime complexes and alternative institutional arrangements.

Functionalist Approach

The emergence of neoliberal institutionalism in the 1980s has had a profound effect on our thinking about the nature of cooperation. The institutionalists argued that international regimes, defined as "sets of implicit or explicit principles, norms, rules, and decision-making procedures around which actor expectations converge in a given issue-area,"[67] make cooperation between rational, self-interested states possible through their functional attributes: primarily, they reduce the transaction costs of legitimate bargains and provide information about actors' preferences and behaviors.[68] Subsequent scholarship has built on these theoretical foundations while narrowing the focus from international regimes to international institutions and then to specific institutional design features. An overarching theme of this literature is that it finds the explanation for institutions in the efficiency-enhancing functions they perform for those who create them.[69]

Abbott and Snidal moved functionalist arguments forward by making the case that states select international organizations (IOs) over other cooperative arrangements because IOs are centralized and independent and, as such, have the capacity to facilitate negotiations, implement agreements, resolve disputes, and carry out a host of other functions.[70] As the research agenda matured, scholars began to treat those characteristics as dependent variables. The degree and kind of uncertainty, for example, could help us explain institutional membership, scope, centralization,[71] and flexibility.[72] Although this scholarship does not explicitly address institutional origins, its implications are clear: the emergence of a particular institution is a result of the efforts of rational actors to enhance

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[67] Krasner 1983, 186.
[68] Keohane 1984, 89, 94.
[69] See Abbot 2000; Abbott and Snidal 1998; Keohane and Marin 1995; Mitchell 1994.
[70] Abbott and Snidal 1998.
[71] Koremenos, Lipson, and Snidal 2001.
[72] Koremenos 2005; Rosendorff and Milner 2001.

the efficiency of cooperation. Can this rational effort also explain institutional density and the rise of regime complexes?

In their article conceptualizing regime complexes, Raustiala and Victor draw on the insights of Keohane's early functionalist work to account for their emergence. Keohane explained that issue density, defined as "the number and importance of issues arising within a given policy space," creates a demand for international regimes rather than ad hoc arrangements.[73] The authors extend this argument, contending "that the evolution of regime complexes is a product of the secular and continuing rise in institutional density that has taken place in the last few decades."[74] On its own, this explanation sounds tautological: we have more regime complexes because we have more institutions. Yet their argument does imply that regime complexes may be a natural byproduct of an international system in which global issues are becoming increasingly complicated and cross-cutting.

There are other accounts that, without using exclusively functionalist logic, make similar claims. In his analysis of the intellectual property rights regime, Helfer also points to the increase of issue density as an explanatory factor. The expansion of intellectual property rights over time has created a demand for the management of relevant policies, which has been met by a number of distinct regimes.[75] Keohane and Victor's explanation of regime complexes is more problem-specific and invocative of the rational design literature. The authors state that three factors help us explain why some regimes are more integrated than others. The first is the distribution of interests: where powerful actors have similar interests across a wide range of issues, the outcome is likely to be a

[73] Keohane 1982, 340. See also Keohane 1984, 79.
[74] Raustiala and Victor 2004, 295.
[75] Helfer 2004, 8.

comprehensive regime. Uncertainty is the second factor: when the costs and gains of cooperation are difficult to determine, states are more likely to opt for a number of small club organizations that are easier to manage and reduce free-riding. Finally, linkage is also important, since issues that lend themselves to linkages are more likely to elicit broad, comprehensive regimes.[76] In addition to these factors, particular issues have their own characteristics that can complicate matters. Climate change, for example, has what Keohane and Victor call high problem diversity; that is, it presents various cooperation problems – the coordination of emission regulations, adaptation, and scientific assessments, as well as compensation for countries unable to adopt emission controls – that make a comprehensive regime difficult to construct.[77]

Helfer's and Keohane and Victor's accounts of the intellectual property rights and climate change complexes have similar beginnings and conclusions. Both start with the observation that some issues are inherently complex. When an issue spills over into other policy spaces or is marked by a high degree of uncertainty, cooperation through traditional institutional arrangements can be relatively difficult to achieve. They conclude that regime complexes have their own advantageous attributes that states solve common problems. They offer flexibility,[78] which allows actors to assess alternatives so that they can effectively reduce transaction costs and information asymmetries.[79] Thus, regime complexes present an opportunity to achieve cooperation in complex settings in a piecemeal, experimental, and adaptable way.

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[76] Keohane and Victor 2011, 8-9.
[77] Keohane and Victor 2011, 13.
[78] Keohane and Victor 2011, 15-16. Flexibility can enhance the prospects of cooperation under uncertainty and can strengthen regime stability. See Koremenos 2005 and Rosendorff and Milner 2001.
[79] Helfer 2004, 8.

There are two limitations to functionalist arguments. First, they begin their analyses with existing institutions and assume they were created because they perform some function. Through this approach, they avoid actually examining institutional emergence and seeing whether patterns of development are consistent with the theory.[80] Second, some studies suggest that, to gain relative advantage over other actors, states engage in forum shopping and institutional proliferation deliberately to create conflicting legal obligations and undermine existing institutions.[81] Because these actions serve to raise rather than lower transaction costs, they are incompatible with the assumptions underlying functionalist arguments, suggesting a different theoretical approach to the study of institutional choices and regime complexes may be necessary.

Power-Distributive Approach

Functionalists present cheating as the main obstacle to international cooperation. They assume that states fear their partners will renege on their commitments, so they establish institutions to overcome these concerns. Yet this view may obscure the most basic and important problem of international politics: the question of who gets what and how. Power-distributive theories seek to fill this void in functionalist theory by assuming that states are primarily concerned with how institutions distribute the costs and benefits of cooperation, not with their efficiency. Therefore, they bargain to create or choose institutions that they believe will maximize their gains and minimize their losses. The distribution of power among actors is central to how conflicts over the terms of cooperation are settled.[82]

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[80] Pierson 2000b, 477.
[81] See Benvenisti and Downs 2007; Drezner 2013; Helfer 2004; Schneider and Urpelainen 2013; Van de Graaf 2013.
[82] Krasner 1991.

Thus, distributive and power considerations are at the forefront of decision-making regarding institutional choice and design. The propensity of powerful actors to guide regulatory outcomes and focal institutions is by now a commonly accepted insight. They have the resources to shape the institutional landscape according to their preferences, creating outcomes from which they will obtain the greatest gains.[83] When the interests of powerful actors are sufficiently similar, they are likely to demand a coherent institutional response to achieve their collective goals.[84] Yet when the distributive conflict associated with cooperation is high, the interests of powerful actors may diverge, thereby reducing the likelihood of a single institutional response. The greater the distributive conflict, the harder actors bargain and the less likely a mutually agreed upon solution becomes.[85]

One way states can hedge against unfavorable distributive outcomes in pre-existing institutions is through forum-shopping and institutional proliferation.[86] Many scholars argue that powerful states are more capable of utilizing these strategies[87] and achieve greater advantages through them, because the availability of greater exit options increases their bargaining advantage.[88] When an institution becomes overly responsive to the demands of weaker states, the great powers have the resources and bargaining leverage to simply create a new institution and move the issue to a more sympathetic venue, thereby undermining the norms of the previous institution.[89] These states can also

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[83] See Drezner 2007; Gruber 2001; Krisch 2005.
[84] Colgan, Keohane, and Van de Graaf 2011, 118; Keohane and Victor 2011, 8-9.
[85] Fearon 1998, fn. 36.
[86] Drezner 2013, 288; Jupille, Mattli, and Snidal 2013, 44; Shaffer and Pollack 2010, 745.
[87] Jupille, Mattli, and Snidal 2013, 37.
[88] See also Benvenisti and Downs 2007, 627. As Davis 2009 writes, larger states are more capable of participating across all venues. Steinberg 2002 states that greater powers often use coercion in the form of threat to exit, as they are able to move the issue to another organization where they are more likely to get their way, or, alternatively, possess the resources to create a new organization that will allocate future resources in the issue area.
[89] Benvenisti and Downs 2007, 599.

exploit the high costs of enforcement that rise with the number of focal institutions,[90] and they can afford the increasing legal costs needed to navigate through complex systems of rules more readily as well.[91] In cases where powerful states disagree with each other regarding a particular institutional arrangement, they compete for the support of third parties.[92] While weaker actors also take advantage of forum-shopping opportunities,[93] power-distributive arguments maintain that an institutionally fragmented international system limits the ability of weaker states to engage in the logrolling necessary for them to bargain more effectively with more powerful states.[94]

The implications of power-distributive arguments are that institutional density and regime complexes are the result of deliberate strategies of primarily powerful states.[95] They challenge the functionalist assumption that greater institutionalization leads to more rule-governed behavior in international politics,[96] as well as the view that regime complexes can enhance the efficiency of cooperation.[97] Rather, because institutional fragmentation increases legal inconsistencies, and further empowers the powerful, it actually undermines the international legal system[98] as well as the mechanisms that enable cooperation.[99]

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[90] Drezner 2013, 288. Where more than one cooperative outcome exists, institutions can serve as focal points – coordinating mechanisms that lead actors' expectations to converge towards a particular choice. See Keohane and Martin 1995, 45; Martin and Simmons 1998, 744. The addition of new institutions into environments where a focal institution already exists can undermine that mechanism.
[91] Busch, Reinhardt, and Shaffer 2008; Guzman and Simmons 2005; Davis 2009.
[92] Schneider and Urpelainen 2013.
[93] See Helfer 1999; 2004.
[94] Benvenisti and Downs 2007, 597.
[95] Krisch 2005, 390 and Benvenisit and Downs 2007, 608 both claim that the United States' pursuit of bilateral agreements and legal fragmentation in general is evidence that regime complexity is advanced by and benefits the powerful.
[96] See Abbott et al. 2000b; Pauwelyn 2004, 904.
[97] See Helfer 2004, 8; Busch 2007; Keohane and Victor 2011.
[98] Benvenisti and Downs 2007; Drezner 2013.
[99] Drezner 2013, 280.

The advantage of the power-distributive approach is that it provides a compelling explanation regarding the circumstances under which regime complexes are likely to develop. Where distributive conflict is high, and where great powers are dissatisfied with existing institutions, institutional proliferation and complexity becomes likely. Yet the approach falls short on three fronts. First, it does not consider how the constraints of existing institutional contexts can limit powerful states' strategies. The act of abandoning an existing institution can have reputational costs, even for great powers.[100] Additionally, states give up the ability to influence the policies of institutions they leave; because institutions tend to be sticky, this can be a long-lasting consequence. Finally, if a critical number of states are satisfied with an institution, it can be difficult to both entice them to a different forum and to acquire their consent for new rules that effectively change the game. This is the challenge the United States government faced throughout its attempts to undermine the UN Framework Convention on Climate Change (UNFCCC). Although the US succeeded in getting important developing and European states to participate in a number of alternative venues, because those countries were satisfied with the terms of cooperation under the UNFCCC, the proliferation efforts did not achieve the desired effect of weakening the UNFCCC's role as the focal institution. These factors can make it challenging for powerful states to reshape the institutional landscape to their liking.

Second, the power-distributive approach underestimates the extent to which weaker states – which in some contexts have greater institutionalized power – can also shape the evolution of a regime. Weaker states have successfully done this throughout the history of global fisheries governance, as we shall see later in this dissertation. Developing states have consistently utilized their numbers in institutions with sovereign

[100] See Guzman 2008, 35; Keohane 1984, 105.

equality voting, either stifling changes that more powerful actors seek or creating new rules that more powerful actors oppose.[101]

Third, the power-distributive approach does not often follow through to assess what happens once states challenge focal institutions by forum shopping or proliferating. This is problematic, for often, such efforts are unsuccessful and the institutions retain their position.[102] Such actions may trigger a counter-mobilization among those who prefer the status quo. These actors may utilize the strategies of forum shopping and proliferation as a way to shore up support for the focal institution.

A Distributive-Historical Approach to Institutional Development and Regime Complexity

This dissertation accepts the premise of the power-distributive approach that states' choices are primarily driven by considerations over how institutions distribute the costs and benefits of cooperation. It also draws on scholarship from historical institutionalism with a focus on institutional development and places the study of regime complexes in the context of broader patterns of institutional emergence, stability, and change.[103] By doing so, it contextualizes state choice in ways that power-distributive scholarship has failed to do: it takes into account the fact that states' choices, as well as those choices' payoffs and effects are shaped by inherited international institutions. This chapter presents a theory that explains how institutional choices generate a variety of processes that lead to a range of outcomes. Nuanced empirical studies allow the

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[101] See Helfer 2004.
[102] Pierson 2004, 81 reminds us of the advantages of lengthening the time-horizons along which we evaluate causal processes.
[103] See Pierson 2004, chapter 4 for a thorough discussion of the merits of shifting analysis from moments of institutional choice to processes of institutional development.

researcher to investigate whether patterns of development are consistent with theoretical expectations of states' motivations and strategies.[104]

The term "institutional development" appears frequently in literature that invokes historical institutionalism, but it is rarely clearly defined. Some accounts use the terms "development" and "change" interchangeably,[105] but Orren and Skowronek critique this approach for excluding other politically relevant processes.[106] They propose a broader definition of political development as consisting of "a durable shift in governing authority."[107] The problem with this conception for international relations scholarship is that "governing authority" refers to the exercise of control by the state. Fioretos helpfully addresses this issue by incorporating Orren and Skowronek's definition when describing international political development, which is "the construction, evolution, and distribution of governing authority through the international formal and informal rules and norms that shape relations within and between states and other actors."[108] A similar emphasis on the origins, evolution, and change of political institutions is present in other prominent scholarship that discusses institutional development.[109] Building on this literature, institutional development in this project refers to the creation and evolution of governing authority through international institutional arrangements over time with respect to a given issue.

The theory presented in this chapter makes two broad claims. First, the early process of institutional selection, which often leads to the selection of a focal institution,

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[104] See fn. 25; Fioretos 2011, 393.
[105] Streeck and Thelen 2005, 19.
[106] Orren and Skowronek 2004, 121.
[107] Orren and Skowronek 2004, 123.
[108] Fioretos 2011, 392.
[109] See Thelen 1999, 396; Thelen and Steinmo 1992, 14; Pierson 2000c, 475; Pierson and Skocpol 2002, 701.

affects subsequent patterns of institutional development. When a new international issue emerges, states tend to bargain over which cooperative arrangement to pursue.[110] As JMS discuss, there are four choices they can make: using, changing, or selecting among a number of existing institutions, or creating a new institution. The extent of the bargaining depends on a number of factors, including the structure of the problem, the shadow of the future, and the extent of distributive conflict. A particular institutional arrangement, once selected, shapes actors' strategies and later outcomes. Even when challenged, the early arrangements tend to remain resilient, making radical deviation from the status quo unlikely. Second, institutional change is a common occurrence, driven primarily by concerns over how the gains of cooperation are distributed, but regime complexes are only one potential outcome. Institutional change takes a number of forms and can entrench the status quo as much as it can lead to institutional fragmentation.

Path Dependence and the Status Quo

The literature on institutional density and regime complexity is rife with examples of states engaging in institutional proliferation and forum shopping. Naturally, this has led to conclusions about the weakening of focal institutions and fragmentation of international law. Yet the scholarship suffers from selection bias: most of the work selects on the dependent variable, focusing on the exploration of cases where regime complexity is high; therefore, we cannot safely accept that such conclusions are widely generalizable. In their work on institutional choice, Jupille, Mattli, and Snidal come to a conclusion that does not sit easily with much of the regime complexity scholarship, namely the "the striking stability and staying power of the institutional status quo – the

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[110] See Fearon 1998.

arrangements existing at the time a new cooperation challenge emerges."[111] The authors use the assumption of bounded rationality to explain why states behave in ways that makes deviations from the status quo uncommon. They describe states as limited in their ability see through the uncertainties of the future and to analyze the costs and benefits of alternative institutional choices. This limitation renders them "satisficers" who adhere to the status quo institution as longs as they deem it "good enough," even if a better option is available.[112]

JMS's conclusion would not surprise many scholars pursuing an historical institutionalist research agenda, who have long focused on explaining the stability of institutional patterns.[113] Much of that literature points to path dependence as the source institutional stability. There is no precise definition of the concept accepted throughout the field,[114] but scholars generally agree that path dependent processes begin after some event, perhaps a critical juncture, brings about the establishment of an institutional arrangement. Once this path is taken, actors adjust their strategies accordingly and previously viable options become sidelined.[115] Thus, initial moves along a particular path increase the likelihood of further movement along the same direction. Early events in a temporal sequence are therefore particularly important.[116] Change does not become impossible; it continues, but is bounded.[117] The implication here is that severe institutional change – the kind that weakens focal institutions – is relatively uncommon. Once an institutional arrangement is in place, it is difficult to challenge or replace.

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111 Jupille, Mattli, and Snidal 2013, 5.
112 Jupille, Mattli, and Snidal 2013, 7, 35.
113 For a review of the literature, see Mahoney 2000; Perison 2004.
114 For a discussion on the range of definitions of path dependence, see Mahoney and Schensul 2006.
115 See Campbell 2004; Pierson 2000b; Thelen 2003.
116 Fioretos 2010, 871; Pierson 2000a, 253.
117 Pierson 2000b, 76.

The concept of path dependence is utilized in a number of contributions on regime complexes, but it is not particularly fleshed out beyond the conclusion that past events influence the future. In their first article on regime complexes, Raustiala and Victor argue that existing institutional frameworks shape and constrain the substance of new rules "in a path-dependent manner."[118] Helfer makes essentially the same point when describing the evolution of the intellectual property rights regime.[119] Keohane and Victor, meanwhile, invoke path dependence a number of times throughout their article on the climate change regime to explain why they believe fragmentation, once in place, is difficult to reverse.[120] While acknowledging that path dependence is an important and relevant process, these articles tell us little about the mechanism through which it works.[121]

A deeper engagement with the concept within international relations scholarship comes in the form of G. John Ikenberry's work on the nature of postwar political orders, defined as governing arrangements among groups of states. He argues that system-transforming wars provide a rare opportunity for victorious states to establish new institutional arrangements. Once these are put in place, they become very difficult to replace. Absent of another major exogenous shock, large-scale institutional change is very unlikely.[122] This is the reason the post-1945 settlement has proven so stable. The institutions created back then have become more deeply engrained in the political and social realities of participating countries over time, giving a wide spectrum of individuals and groups a stake in their continued existence. The costs of changing this order have

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[118] Raustiala and Victor 2004, 296.
[119] Helfer 2004, 15.
[120] Keohane and Victor 2011.
[121] See also Colgan, Keohane, and Van de Graaf 2011.
[122] Ikenberry 2001, 71.

thus accumulated with time, making the emergence of an alternative system or institutions relatively unlikely.[123]

For Ikenberry, path dependence occurs because institutions generate increasing returns:[124] dynamic processes through which the benefits of a particular action accumulate over time, thereby steadily increasing the costs of switching to some plausible alternative.[125] This kind of argument is commonly associated with Paul Pierson, who identifies increasing returns as the mechanism that produces path dependence.[126] His work draws heavily on the contributions of economists studying technological trajectories, who find that due to elements of chance, certain technologies can achieve an advantage and prevail in the marketplace even if more efficient alternatives exist.[127] Pierson argues that the same characteristics that give rise to technological increasing returns apply to politics; these are: the creation of new institutions, especially organizations, generally requires *large set-up or fixed costs*, producing incentives for future investments; operating within the institutional constraints creates *learning effects*, leading to higher returns from further use; *coordinating effects* occur when the benefits an individual receives from a particular activity increase as it is institutionally coordinated with the activity of others; and the tendency of actors to adapt their behavior based on their expectations of others' future actions, known as *adaptive expectations*.[128]

[123] Ikenberry 2001, 253.
[124] Ikenberry 2001, 69.
[125] Pierson 2004, 50. There is a lot of terminological confusion in the literature. Pierson 2004, 2000c utilizes increasing returns in a way that is equivalent to positive feedback. Mahoney and Schensul 2006, 466 categorize increasing returns as a kind of self-reproducing sequence, distinct from self-reinforcing ones. Yet in another paper, Mahoney 2000, 508 states increasing returns generate self-reinforcing sequences. Page 2006, 88 distinguishes between increasing returns, self-reinforcement, and positive feedback.
[126] Pierson 2000a.
[127] See Arthur 1989.
[128] Pierson 2000a, 254.

Yet there are many scholars who claim that increasing returns are only one of a number of mechanisms that produce path dependence.[129] This chapter argues that states' selection of an institution can set in motion path-dependent institutional development to the broader regime if one or more of three key mechanisms are present: set-up costs, network effects, and institutional benefits. Set-up costs refer to the investment of resources necessary to establish an institution. Network effects are the benefits derived from linkages and cooperation between institutions. Institutional benefits refer to material payoffs. These mechanisms create positive feedback: small bonuses actors receive due to their membership in the institution.[130] The greater the set-up costs, institutional benefits, and network effects, the fewer incentives states have to pursue institutional choices that undermine the institution and deviate from the status quo, and the less likely the regime is to develop towards greater complexity.

This dissertation builds on some of Pierson's insights, arguing, first, that institutions that entail significant set-up costs are more resilient than those that do not require such investments. Institutions can be difficult to establish, as they require the cooperation of a large number of actors who must learn new rules and develop particular skills. Often, institutions also necessitate some organizational infrastructure.[131] These efforts require time and money. When they make these kinds of investments, states become reluctant to cut their losses and abandon and replace even institutions they are dissatisfied with.[132] Therefore, all else equal, regimes with focal institutions that have

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[129] Mahoney 2000, 509; Mahoney and Schensul 2006, 466; Page 2006, 89; Thelen 1999, 396.
[130] Fioretos 2010, 377; Page 2006, 88. Increasing returns differ in magnitude but not in kind, as they provide a steady accumulation of benefits.
[131] Hacker 2002, 55 makes a similar point about domestic policies, stating that those that lead to the creation of large organizations with significant setup costs tend to be more durable.
[132] Fioretos 2011, 373.

large set-up costs are likely to develop in relatively less complex ways because displacement will be difficult to achieve.

Second, institutions with bureaucratic capacity tend to generate network effects by creating and maintaining complementary linkages with other bodies. Once they are part of an international infrastructure on which other institutions and their members rely, they become more indispensable, thus creating positive feedback.[133] Thus, regimes with focal institutions that generate network effects are likely to develop in less complex ways, as actors have incentives to abstain from institutional choices that lead to displacement. This factor can help explain the diverging fates of the UN Framework Convention on Climate Change (FCCC) and the Asia-Pacific Partnership on Clean Development and Climate (APP). The FCCC is still the focal institution for the global climate regime, despite its inefficiencies and wavering support from some powerful countries. Meanwhile the APP, an institution set up by the world's greatest superpower as part of an attempt to undermine the FCCC, has become obsolete. Part of the explanation lies in the fact that the FCCC coordinates not just the actions of member-states, but is linked to a number of other institutions, including the International Civil Aviation Organization, the International Maritime Organization, the UN Environment Programme, the Food and Agriculture Organization, the World Bank, and many others. The APP, as a relatively new, lone-standing club organization was not interwoven into the climate regime and was relatively costless to abandon.

Finally, focal institutions that confer relatively broad material benefits set in motion path-dependent processes that are likely to lead to less complex regime

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[133] Fioretos 2011, 377; Hacker 2002, 55; Pierson 2004, 284. Fioretos 2011 and Page 2006 refer to these as self-reinforcing qualities.

development. Scholars across subfields agree that identifying the benefits institutions confer upon political actors is necessary to understanding institutional stability and change.[134] The rationale is simple and convincing: those who benefit from an institution will prefer the status quo to any significant divergence and will act to ensure its entrenchment. For an example, we can think of the Montreal Protocol. The agreement implemented regulations industrial countries had previously pursued domestically, allowing their chemical industries to remain competitive globally. Developing countries, meanwhile, are able to draw on the Protocol's Multilateral Fund for access to finance and technology. Nearly everyone has a stake in the current system. It is no surprise, then, that states keep turning to the Montreal Protocol over and over as they continue to struggle to minimize ozone depletion and regulate the range of chemicals that contribute to it. The creation of the 200 mile exclusive economic zones (EEZ) under the Third UN Convention on the Law of the Sea (UNCLOS) is another example of this mechanism at work. This agreement not only generated economic benefits for about 150 of the world's coastal countries, but also expanded the stakeholders interested in maintaining the new system through the expansion of those states' domestic fishing industries and bureaucracies tasked with fisheries management. In cases like the Montreal Protocol and UNCLOS, the beneficiaries – governments and their domestic constituencies – find deviation from the status quo that undermines the focal institution to be against their interests. Even if there are powerful actors dissatisfied with the status quo, they will find it challenging to get a critical mass to defect from the focal institution. The stakeholders

[134] Colgan, Keohane, and Van de Graaf 2011, 119; Hacker 2002, 55; Jupille, Mattli, and Snidal 2013, 47; Mahoney and Thelen 2010, 8; Pierson 1993.

would resist any changes that would generate greater complexity, refusing to join new institutions meant to undermine the present system.

To summarize, regimes vary in the extent to which early institutional selection sets in motion path-dependent processes. Where states select a focal institution that has large set-up costs, generates network effects, and confers broad benefits, they create stakeholders whose interests are to maintain the institution's status. In such cases, the incentives for forum shopping and proliferation behaviors are low. Therefore, institutional development within the regime should trend towards relatively modest complexity, ceteris paribus. When a focal institution produces positive feedback, it is likely to maintain its position even under conditions in which we might otherwise expect it to be successfully challenged. Even where proliferators create new institutions, sharp divergence from the path requires others to join them, and this does not always happen. Many regimes do indeed have focal institutions that generate positive feedback – this may go a long way towards explaining Jupille, Mattli, and Snidal's general finding regarding status quo stability.

Sources and Patterns of Incremental Institutional Change

This dissertation presents a distributive historical model of institutional development. It argues that status quo dissatisfaction serves as a trigger for institutional change. The combination of the intensity of the distributive conflict, the inertia of the focal institution, and the size of the coalition of the dissatisfied determine the patterns of institutional change and the development toward greater or lesser regime complexity.

Dissatisfaction can have a number of sources, as there are myriad specific reasons for which states can be displeased with any particular institution. Members may view an institution as performing inadequately. Alternatively, they may be displeased with the goals an institution pursues, as was the case with the United States and UNESCO. Changes in the balance of power can leave some members unhappy with an institution's decision-making procedures, which we have seen with the IMF and China. Exogenous changes can be important as well by shifting the preferences of members towards dissatisfaction. While all of these factors may matter as potential dissatisfaction with the status quo, this project accepts the proposition made in power-distributive approaches that distributive considerations about the material impact of substantive rules are at the forefront of states' institutional decision-making.

The previous section discussed the importance of institutional benefits to the maintenance of the status quo, pointing out that institutions such as the Montreal Protocol that provide clear, tangible benefits to members and create many stakeholders disincentivize actors from making complexity-inducing changes to the broader regime. Of course, instruments like the Montreal Protocol are an exception rather than the rule. Few institutions confer such wide benefits; indeed, many arrangements are set up specifically to advantage only certain actors. We can turn again to UNCLOS for an example. The creation of the EEZ clearly advantaged the majority of coastal states. Still, it left states with sophisticated distant-water fishing operations who were previously free to roam the seas and fish anywhere they saw fit worse off, making dissatisfied parties out of them. Through their distribution of material benefits, focal institutions set the parameters of distributive conflict and determine who the dissatisfied parties will be.

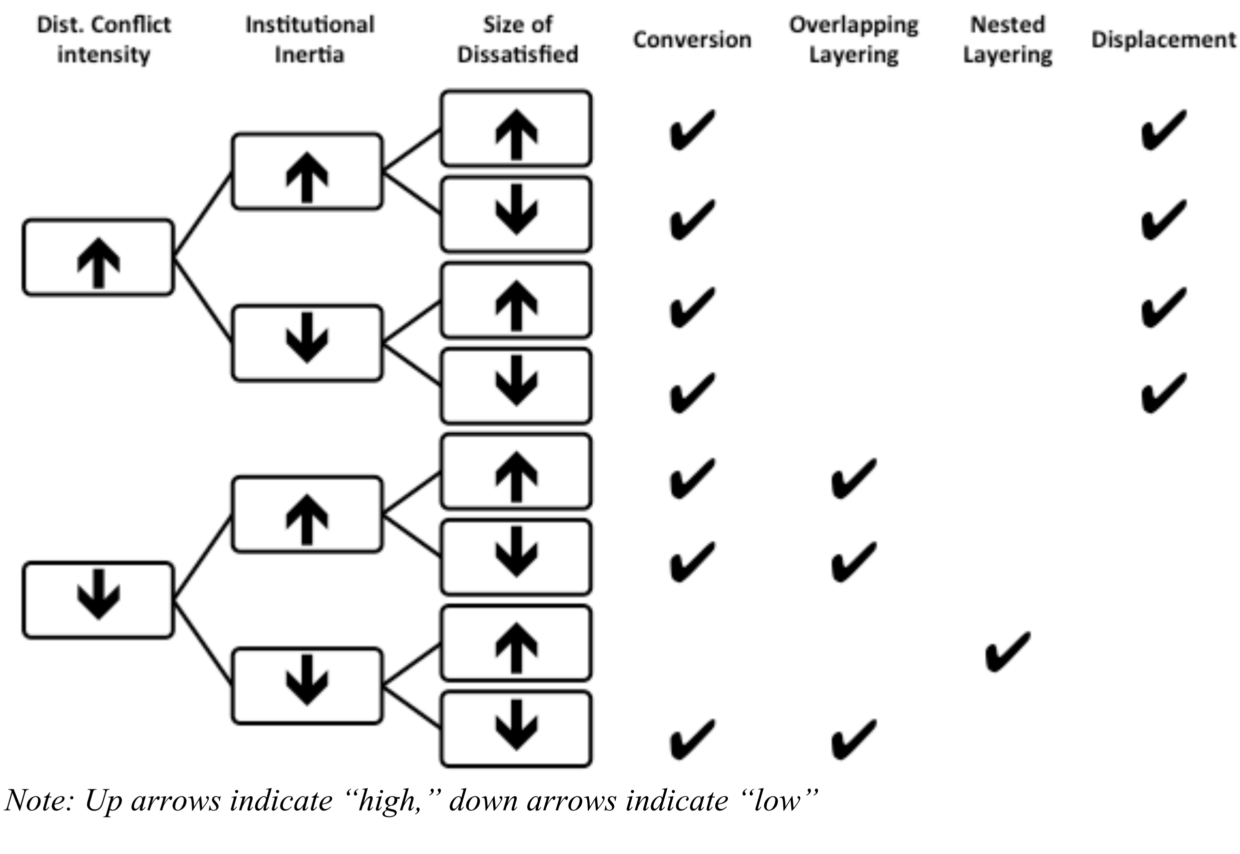
The dissatisfied will always attempt to re-shape the institutional landscape in order to gain distributive advantages. The processes of change that result from their choices are determined by the interaction of three variables: the intensity of distributive conflict, institutional inertia, and the size of the coalition of the dissatisfied. The intensity of the distributive conflict refers to the material stakes that are implicated by a particular issue. For example, because climate change is connected to most economic activity, the intensity of distributive conflict associated with it is high. Institutional inertia depends on the number of veto players in the focal institution: individuals or collective actors whose agreement is necessary for institutional change to occur.[135] These actors are products of formal and informal decision-making procedures, which vary across institutions. Unanimity voting of course produces the largest number of veto players, rendering such institutions highly resistant to change.[136] Finally, the size of the coalition of the dissatisfied simply refers to the number of states seeking institutional change due to their dissatisfaction with the status quo.

Figure 2.1 indicates the patterns of institutional change the combinations of these variables are expected to yield. It is important to point out that these are not the only possible outcomes, but rather the most likely ones to be observed. What becomes immediately apparent is that *conversion* is a fairly ubiquitous process, existing in most combinations of the independent variables. Whenever status quo dissatisfaction exists but the dissatisfied find it challenging to formally change the focal institution through revisions, amendments, or protocols due to the high intensity of distributive conflict, high institutional inertia, or their small coalition, the dissatisfied may succeed in making

[135] This definition follows Tsebelis 1995, 293.
[136] As Steinberg 2002 shows in his work on the role of power in the consensus-based World Trade Organization, there are exceptions.

smaller adjustment that result in the conversion of the focal institution. Additionally, because every state has their preferred institutions, forum shopping is also an attractive option. States can easily *select* a venue other than the focal institution they expect to be more sympathetic to their cause and place the issue of interest on its agenda. Often, the agents of change succeed in getting the alternative institution to consider the issue and perhaps even take some action; however, as discussed previously, formal change within a preexisting institution can be difficult to achieve. Because *conversion* does not mark a significant divergence from the status quo, it generates relatively little complexity.

Figure 2.1: Expectations: Independent Variables and Most Likely Resulting Change Pathways



Note: Up arrows indicate "high," down arrows indicate "low"

The first combination of variables in *Figure 2.3* – high intensity of distributive conflict, high institutional inertia, and a large coalition of the dissatisfied – is most likely to produce *displacement* and *conversion*. All else equal, a large coalition of the dissatisfied may be able to change the focal institution even in the presence of high institutional inertia. However, when the intensity of distributive conflict is high, the interests of the coalition of the dissatisfied are likely to diverge. Additionally, high stakes distributive conflict motivates actors to bargain harder. These factors make it difficult for the dissatisfied to come to a mutually agreed upon solution,[137] which is necessary for overcoming the inertia of focal institution. Unable to formally change the focal institution and finding the high stakes status quo costly, the dissatisfied have an incentive to pursue institutional *creation* that disrupts the status quo through *displacement*. It is important to point out that the extent to which these strategies succeed in displacement depends on how many actors are willing to defect from the status quo institution and accept the new set of rules created by the agents of change. The dissatisfied are also likely to forum shop, pursuing the *change* of pre-existing institutions, but will see their efforts blocked by the status quo powers and may only be able to achieve *conversion*. The efforts of the agents of change within the focal institution may also result in *conversion*.

The second combination of variables – high intensity of distributive conflict, high institutional inertia, and a small coalition of the dissatisfied – is also most likely to produce the same outcome: *displacement* and *conversion*. A small coalition of the dissatisfied is unable to overcome the inertia of the focal institution, and so has to pursue its goals through other strategies. Because the intensity of distributive conflict is high, the dissatisfied have an incentive to dismantle the existing system. They are likely to do so through institutional *creation* intend to lead to *displacement.* The dissatisfied are also likely to forum shop, pursuing the *change* of pre-existing institutions, but will be unlikely to achieve formal change due to their small numbers. These efforts, along with their

[137] See Fearon 1998, fn. 36.

activities in the focal institution, may result in *conversion*. Where the coalition of the dissatisfied is small rather than large, the degree of complexity is likely to be lower because fewer actors are engaging strategies intended to change the status quo.

The third combination of variables – high intensity of distributive conflict, low institutional inertia, and a large coalition of the dissatisfied – is also most likely to produce *displacement* and *conversion*. All else equal, a large coalition of the dissatisfied should be able to change a focal institution that is low in inertia; however, as discussed above, where the intensity of distributive conflict is high, the interests of the dissatisfied are likely to diverge, leaving them unable to coalesce around a common avenue for change. So once again, we can expect groups of dissatisfied states to attempt to *displace* the existing system through institutional *creation*. The dissatisfied are also likely to pursue the *change* of pre-existing institutions through forum shopping, but will see their efforts blocked by the status quo powers and will succeed only in *conversion*. The efforts of the agents of change within the focal institution may also result in *conversion*.

The fourth combination of variables – high intensity of distributive conflict, low institutional inertia, and a small coalition of the dissatisfied – once again is most likely to produce *displacement* and *conversion*. A small coalition of the dissatisfied is unable to change the focal institution even where low inertia is present. Because of the high stakes of distributive conflict, the dissatisfied will attempt to *displace* the status quo institutions through *creation*. They will also forum shop to other institutions, attempting to change them towards their goals, but will not be able to achieve significant, formal change due to their small numbers. Therefore, their forum shopping activities, if at all successful, will result in *conversion*. The efforts of the agents of change within the focal institution may also result in *conversion*.

The fifth combination of variables – low intensity of distributive conflict, high institutional inertia, and a large coalition of the dissatisfied – is most likely to produce *overlapping layering* and *conversion*. Although it is possible for a large coalition to overcome high institutional inertia to add a nested layer to the focal institution, this is not likely to occur in many cases. As we know, cooperation becomes more difficult to achieve as the number of actors increases; thus, the members of a large coalition are often unable to agree on a mutual path to change, even when the intensity of distributive conflict is low. The low stakes distributive conflict do, however, make it likely that the agents of change will engage in institutional *creation* that leads to *overlapping layering* rather than displacement. The dissatisfied are also likely to forum shop, which along with their efforts in the focal institution, may lead to *conversion.*

The sixth combination of variables – low intensity of distributive conflict, high institutional inertia, and a small coalition of the dissatisfied – is also likely to produce *overlapping layering* and *conversion*. A small coalition is unable to overcome high institutional inertia to change the focal institution. Because of the low stakes distributive conflict, the dissatisfied are likely to *create* one or multiple institutions that are mostly compatible with the focal institution, leading to *overlapping layering.* The dissatisfied are also likely to forum shop, which may lead to *conversion,* along with their efforts in the focal institution.

The seventh combination of variables – low intensity of distributive conflict, low institutional inertia, and a large coalition of the dissatisfied – is most likely to lead to *nested layering*. In these cases, enough members of the coalition are likely to be able to agree on a mutual path forward, since the intensity of distributive conflict is low. Because of the low institutional inertia, the coalition can overcome the veto and *change* the focal institution.

The eighth combination of variables – low intensity of distributive conflict, low institutional inertia, and a small coalition of the dissatisfied – is most likely to lead to *overlapping layering* and *conversion*. Although a small coalition may be able to change a focal institution in which inertia is low, this is unlikely in most cases. Because the low intensity of distributive conflict, the dissatisfied are likely to opt for compatible institutional *creation*. They are also likely to forum shop. This, as well as their activities in the focal institution, may lead to *conversion*.

Before moving on, it is important to point out that the characteristics of the coalition of the dissatisfied are also important. To successfully change the status quo, the agents of change must either be powerful enough to *create* new institutions, or numerous enough to overcome the status quo veto and *change* other pre-existing institutions. Creating a new institution, particularly one that aims for relatively large membership and requires an organizational infrastructure, can be an expensive endeavor. Powerful states generally have the resources necessary to pursue this goal. As the regime complex literature shows, they are more likely to engage in proliferation than less developed states.[138] What options can we expect dissatisfied weaker states to turn to? They generally lack the resources and clout to *create* new institutions;[139] however, they have the advantage of their numbers, which they have historically used to vote as a bloc. While

[138] See Drezner 2013.
[139] This is, of course, a broad statement, since the category of developing states includes many actors with a range of resources.

this is not always sufficient to pursue *change* in the focal institution, it can be used to *change* pre-existing institutions in which powerful states are either absent[140] or in which sovereign-equality voting rules tend to give them greater institutionalized power. This is why developing states most often turn to the UN and its subsidiary bodies when dissatisfied with the status quo.[141]

Research Design

This dissertation utilizes the method of structured, focused comparison of three cases within the issue area of the global environment: ozone depletion, climate change, and the exploitation of the global fisheries. These cases were selected because they display variation in regime complexity, the variable of interest in this study. To standardize data collection and make systematic comparison of the findings possible, the same set of questions guides the examination of each case.[142] This section justifies the case selection, explains why process tracing is the most appropriate method for analyzing the historical data, and operationalizes the independent and dependent variables as well as the causal processes.

Case Selection

The main challenge of case selection is to choose appropriate cases from a larger universe that will allow for generalizable findings. A common criticism of political science research is that it falls short in this regard, as it is often based on cases in which

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[140] Benvenisti and Downs 2007, 619; Helfer 2009.
[141] Benvenisti and Downs 2007, 620.
[142] George and Bennet 2005, 67.

there is no variation in the dependent variable.[143] Indeed, as previously discussed, this methodological problem is found in much of the existing work on regime complexity, with studies frequently selecting on the dependent variable for high degrees of complexity. In order to avoid this shortcoming, this project applies a most-similar systems design, which looks for cases that are as similar as possible in all respects but vary in outcome. This allows one to hold constant a number of factors, thereby increasing analytical leverage. By conducting a thorough investigation, the researcher can identify the difference(s) that explain the variation in the dependent variable.[144]

For a most-similar systems design, it makes the most sense to look within one particular sector. Within a single sector, we are most likely to find cases with similar problem structures, actors, enforcement problems, and levels of uncertainty, and can therefore hold these variables constant. All of these variables may serve as alternative explanations, so holding them constant is important for making inference. This project selects cases from within the environment sector. The advantage of choosing from the environment is that it lacks a single focal institution – there is nothing akin to a World Environment Organization – and instead consists of a number of distinct global problems that each has its own regime. This means there is no pre-existing structure affecting institutional development across the cases, making environmental issues fruitful for cross-case comparison. Many other sectors do not meet these criteria. Further, there is evidence that regime complexity is a factor in environmental governance: ten percent of multilateral environmental agreements surveyed in 2001 included trade-related

[143] Random sampling is, of course, not an option for qualitative studies, as it is more likely to result in bias than intentional selection. See King, Keohane and Verba 1994, 124-129.
[144] Gerring 2008, 668; Mahoney and Goertz 2004, 664-665.

compliance measures,[145] and international lawyers have noted that there is potential for overlap not only between issues relating to environment and trade, but also to human rights and conflict.[146] This suggests that the conditions for the rise of regime complexes are present, but there is no reason to suspect that the environment as a whole is significantly more complex than other sectors. Few studies have scrutinized environmental issues in relation to regime complexity,[147] and this project is the first to examine and explain *variations* is regime complexity around different environmental problems.

There is no definitive list of environmental problems. This author turned to a number of widely cited and authoritative recent publications on international environmental law for an overview.[148] These sources identify a combined total of thirteen environmental issues: acid rain and regional air pollution; ozone depletion; climate change; deforestation; land degradation; freshwater degradation and shortages; marine fisheries decline; toxic pollutants; loss of biological diversity; excess nitrogen; nuclear energy and waste; hazardous wastes (other than nuclear); and arctic management. Out of these, this project analyzes ozone depletion, climate change, and marine fisheries decline based on the most-similar systems criteria. Because each of these is a global commons problem, the competing explanation of problem structure holds constant. Ozone and climate change are also both atmospheric issues. Yet crucially, these issues display variation in the dependent variable of institutional development. The ozone and climate regime have extreme values on regime complexity – the ozone regime is mostly coherent,

[145] Stokke 2004.
[146] Kiss and Shelton 2007; Beyerlin and Marauhn 2011.
[147] Keohane and Victor 2011 and Oberthűr and Stokke 2011 are notable exceptions.
[148] Beyerlin, Ulrich, and Marauhn 2011; Hunter, Salzman, and Zaelke 2011; Kiss and Shelton 2007; Speth and Haas 2006; Yearbook of International Environmental Law 2010.

while the climate regime trends towards greater complexity. The marine fisheries regime, a global oceanic commons, falls in the middle; although the Third UN Convention on the Law of the Sea is its focal institution, the involvement of other institutions has increased over time and there is some degree of norm conflict in the regime.

Naturally, it is possible that the selection of cases from one sector limits the generalizability of the study's findings. As previously stated, the strength of comparing cases from one issue area is that the design helps hold other variables constant, but these variables may be extreme in other sectors and affect outcomes. For example, the problem structure of human rights issues is different in substantive ways from that of environmental commons, which may influence patterns of institutional development. Furthermore, it is a striking, if unplanned, common feature of the three cases in this dissertation that in each case a focal institution developed early on, strongly shaping the subsequent development of the institutions in that issue. The argument put forward here is most likely to apply to other regimes that also have a focal institution, rather than those in which such an institution does not exist.

Measuring Regime Complexity

Regime complexity, as discussed earlier, varies along three dimensions: institutional integration, norm conflict, and actor constellations. Institutional integration refers to the extent to which governance and decision-making within a regime are contained to a focal institution or dispersed across loosely connected or unrelated institutions. To measure it, the case studies assess the number of institutions that are producing and implementing rules within each issue, and the extent to which the institutions' procedures are integrated. Complexity is lowest where governance of an issue is contained within a single focal institution, and highest where numerous, largely unrelated institutions engage in rule-making and implementation. Norm conflict depends on the extent to which institutions addressing a given issue share compatible norms, rules, and principles. The case studies turn primarily to international legal scholarship that assesses whether the core norms of the most prominent institutions within a regime are complementary or conflicting. Complexity is lowest where norms are considered complementary, and highest where they are conflicting. Finally, actor constellations are determined by the cohesion of states' membership in and support of institutions in a regime. The case studies assess the extent to which relevant actors accept and support the same or disparate institutions as being most appropriate for decision-making within the regime. Complexity is greatest when major actors belong to and/or support different institutions.[149] It is, of course, difficult to precisely measure regime complexity. Therefore, the case studies describe not only the outcomes in 2016 in terms of regime complexity, but also and especially the pathways of institutional development that generate greater or lesser degrees of regime complexity.

Measuring Patterns of Institutional Change

The processes of institutional change that affect the dimensions of regime complexity to varying degrees are layering (nested and overlapping), displacement, and conversion. Layering entails the addition of new institutions on top of existing institutions within regime governing a particular issue area. In the terminology of the institutional choice and regime complex literature, the actions that lead to layering are

[149] These definitions follow Bierman et al. 2009.

institutional *change* and *creation*. The former entails the addition of amendments and protocols to pre-existing institutions and therefore take the form of nesting. The latter refers to the proliferation of new institutions that overlap in scope with the focal institution. Layering can contribute to complexity mostly when the new rules are not nested within the focal institution – this can lead to lower institutional integration, changing actor constellations, and some norm conflict – but not in high degrees, since a defining characteristic of layering is that the new changes or additions build on and are generally compatible with pre-existing institutions.

Displacement occurs when actors engage in institutional *change* and *creation* to establish new rules that compete with and have the potential to ultimately replace the focal institution within the regime. The key distinction between displacement and layering is that the former by design introduces higher norm conflict than the latter. For this reason, displacement has a high potential to generate complexity. But the extent to which it does lead to deviation from the status quo depends on its effect on actor constellations; that is, once an alternative institution is created, are other states willing to abandon the pre-existing institution and sign up for the new set of rules? Complexity will be greater in cases in which a significant number of actors put their support behind the competing institution. This is more likely when we move on the continuum from bilateral towards larger multilateral institutions.

Finally, the process of conversion does not involve the introduction of new instruments, either through change or creation. Conversion occurs when states dissatisfied with the status quo *select* (forum shop) one or a number of pre-existing institutions and succeed in having it consider an issue that is outside of its scope.

However, conversion does not entail formal *change* of the selected institution. It occurs when the selected institution remains formally the same but is redirected towards new goals or functions. In cases in which *selection* does at some point lead to formal *change* of the newly selected institution, for example through the adoption of an amendment or protocol, the process of change becomes either layering or displacement, not conversion. Conversion may affect actor constellations, but because conversion does not result in any formal changes, its potential to create norm conflict or lower institutional integration is relatively low; therefore, this process does not generate much complexity in a regime.

Independent Variables

There are three independent variables in this study: institutional inertia, the size and capabilities of the coalition of the dissatisfied, and the intensity of distributive conflict. Institutional inertia is relatively easily measured. The decision-making procedures of a particular institution determine the number of veto players. If it is a simple majority institution, the veto actors make up half of its membership and the agents of change must outnumber them to pursue an alternative from within. If it is a consensus-based institution, the hurdles to change are exceptionally high. In between these two extremes, many institutions require either a two-thirds or three-fourths majority for formal change to occur. Therefore, in the case studies, institutional inertia is coded as high where states need at least three-fourths of members' agreement to accomplish institutional change. Where the agreement of fewer than three-fourths of members is necessary for institutional change to occur, inertia is coded as low.

Institutional benefits exist in many forms, but the primary dimension this dissertation highlights is material. They can be a source of stability as well as change. Where benefits are specific, tangible, and extend to most actors, status quo dissatisfaction tends to be relatively low. Yet when material institutional benefits extend only to specific groups or disproportionately benefit some over others, we have the presence of distributive conflict. Distributive conflict triggers status quo dissatisfaction, and its intensity determines the pattern of institutional change.

Measuring distributive conflict is challenging. One way to gauge it is by assessing how many cooperative agreements are possible when a new issue emerges, and how far apart actors are in their preferences on the outcome.[150] This project identifies the preferences expressed by major relevant actors during the negotiating phases of new institutions, particularly focal institutions, and then estimates how close the agreed to outcome is to those expressed preferences at subsequent points in time. The actors who view the outcome as far from their expressed ideal make up the coalition of the dissatisfied. The coding of the size of the coalition reflects its importance relative to institutional inertia: the coalition is coded as large when it includes at least three-fourths of the focal institution's members and small where it entails fewer than three-fourths of the focal institution's members.

Examining the political cleavages that emerge during negotiations for new institutions is particularly useful towards identifying distributive conflict. Negotiations for global environmental agreements have tended to follow similar outlines. The broadest cleavage that tends to develop during the construction of environmental institutions is

[150] Koremenos, Lipson, and Snidal 2001, 775.

along developed-developing country or North-South lines.[151] The former, having stricter domestic environmental regulations as well as constituencies concerned with environmental problems, usually place the problem on the global agenda. Their aim is to get the latter to agree to global regulations that are in line with policies enacted domestically. Developing states, being primarily concerned with economic growth and having historically contributed relatively little to environmental degradation, demand some form of financial and technical compensation for their cooperation. The ways in which the resulting institution resolves these two issues is vital to determining status quo satisfaction.

Of course, more fine-grained cleavages can and do develop as well. Relatively powerful actors, particularly the United States and European Community, often find themselves in disagreement over global environmental politics. Over time, US commitment to environmental issues has waned, while within the EU it has increased. And although historically, the developing world has negotiated global environmental agreements as a unified bloc, divisions have over time begun to sprout between these actors as well. These are often determined by the particular issue at hand. For example, developing-country oil producers have interests that are quite distinct from small island developing states when it comes to climate governance. Similarly, the interests of developing country distant-water fishing nations like China are not in line with those of the least developed coastal states. Hence, the cleavages that arise among states, and the nature and degree of distributive conflict, are likely to be issue-specific and variable, and subject to empirical investigation in each case.

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[151] Najam 2005.

The material interests that are implicated by the issue at hand are important for determining the intensity of dissatisfaction with the status quo. The case studies collect statistics, where they are available, regarding the economic activities that are implicated by each issue. For example, the fisheries chapter contains data on the most important states' fishing industries, such as the fisheries' value as a source of export earnings and as purveyors of employment. The greater these values, more confident we can be that the states see the stakes of distributive conflict as high for the particular state. The case studies also utilize primary and secondary sources that discuss important states' perceptions regarding the impacts they expect international instruments to have on their economic activity. For example, there is abundant data on the US government's perception on the potential negative impact of the Kyoto Protocol on the US economy, indicating a high intensity of distributive conflict. Overall, the greater the real and perceived economic implications, the higher the intensity of distributive conflict. The intensity of distributive conflict is coded as high where the economic implications are significant relative to the other case studies.

Alternative Explanations

Scholars embracing functionalist arguments have often turned to uncertainty as an explanatory variable for institutional outcomes.[152] The literature identifies three kinds of uncertainty, reflecting the extent to which actors lack information about others' behavior, the state of the world, or others' preferences.[153] Keohane and Victor highlight uncertainty about the state of the world as a partial explanation for variations in regime complexity.

[152] For early examples, see Keohane 1984, 93-95; Young 1989, 361-362.
[153] Koremenos et al. 2001a, 778.

They argue that when states are unsure about the gains and risks that will result from regulations, they are more likely to cooperate through smaller club organizations than through broad, comprehensive agreements, leading to more complex regimes.[154] The advantage of such regimes is that they allow for greater flexibility, which states can experiment with to achieve more effective cooperation.[155] The empirical studies in Koremenos et al.'s rational design volume support this kind of argument. Although they focus on individual instruments rather than regimes, the analyses of five cases find that uncertainty about the state of the world corresponds to greater institutional flexibility.[156]

As an alternative explanation to the historical distributive argument presented in this chapter, the case studies test for a relationship between uncertainty about the state of the world and variations in regime complexity. The expected relationship is positive: greater uncertainty should correspond to more complex regimes. Uncertainty here is operationalized as the extent of scientific, technical, and economic knowledge states have that allows them to predict the consequences of their own actions, the actions of other states or of international organizations.[157] Discussions on scientific, technical, and economic issues are often at the forefront of cooperation on environmental problems. Each of the case studies in this project assess at various points in time the extent to which important actors express certainty about and agree on the activities that cause the environmental problem; the most appropriate and effective regulations to implement in response to the problem; and on the economic implications of such regulations.

[154] Keohane and Victor 2011, 9.
[155] Keohane and Victor 2011, 15-16.
[156] Koremenos et al. 2001b, 1055.
[157] This definition follows Koremenos et al. 2001a, 779.

Uncertainty is of course not the only variable of importance to functionalist scholars. As discussed previously, functionalism broadly finds the explanation for institutions in the efficiency-enhancing functions they perform for those who create them.[158] An advantage of this project is that it carefully assess important states' expressed preferences as they make institutional choices. Therefore, the case studies also identify instances in which states invoke functionalist, as opposed to distributive logic when they create or select international institutions. Insistence by one or a number of actors that a particular institution or arrangement is most efficient for addressing a problem is indicative of functionalist logic, for example. Through this approach, the project weighs in on functionalist-distributive divide regarding the preferences of states and their effects on institutional development as it relates to regime complexes.

Process Tracing and Data Collection

This dissertation project is about institutional development, which refers to the creation and evolution of governing authority through international institutional arrangements over time around a given issue. The particular aspect of institutional arrangement of concern in this study is the level of regime complexity. The main objective is to explain the patterns of institutional development that result in variations in regime complexity. Process tracing is the most appropriate method for achieving this goal. Three characteristics distinguish this method. First, process tracing relies on the collection of observations that are based on in-depth case study knowledge and provide insight about context, processes, or mechanisms.[159] Second, it requires careful description

[158] See Abbot 2000; Abbott and Snidal 1998; Keohane and Marin 1995; Mitchell 1994.
[159] Mahoney 2010, 124.

that analyzes the trajectories of change. Third, the method necessitates the researcher to pay close attention to the sequences of independent, dependent, and intervening variables.[160]

For these reasons, process tracing it is ideal for studying institutional development. Institutional change is often incremental, so it is important to assess not just what the institutional landscape looks like at the end of the observation period but how it changed over time.[161] Process tracing is also the recommended method for most-similar case comparisons.[162] It allows the researcher to clearly identify the mechanisms and sequence through which the independent variables interact with one another and translate to particular processes of change. This careful within-case analysis then allows for a rigorous cross-case comparison that can demonstrate that the independent variables account for the difference in outcomes. Finally, as *Table 2.2* indicates, the same pathways can result from different values in the independent variables, so process tracing is necessary here to tease out causality.

The analysis of each case begins with the identification of the emergence of the issue as one that necessitates global interstate cooperation. The sources of the problem, the actors affected by it, its economic implications, and the extent to which solutions to the problem are known and available are identified. Each case then carefully describes the bargaining that occurs as states try to define the terms of cooperation through one or a number of institutions. This allows for the identification of the status quo actors and the agents of change once an institutional arrangement around the issue area emerges.

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[160] Bennett and Checkel 2014; Collier 2011, 823.
[161] Pierson 2004 argues that studies of institutional change are best when changes are traced over time.
[162] Bennett and Elman 2007, 175.

Once an institutional arrangement or focal institution has been established, process tracing is used to document and analyze future choices and processes of change. Each time change occurs, the case study identifies the motivation of the agents of change and again asks the same set of questions: What negotiating cleavages emerge? How far are the negotiating blocs from each other in their preferences over the terms cooperation? To what extent are the groups satisfied or dissatisfied with the outcome of negotiations? The case study also entails a detailed description of the change in terms of the shape that it takes and its relationship to the focal institution.

The data for the case studies are various. They include secondary sources that consist of historical accounts as well as analyses and interpretations of international law instruments. The primary sources include international treaties; news accounts; statements of various state agencies, non-governmental organizations, and international organizations; United States Congressional hearings; and documents from *the Foreign Relations of the United States* series. The identification of actors' preferences presented the biggest challenge in data collection. The problem was most acute for non-Western states, particularly smaller ones. The availability of sources also varied across cases, with data being widely available for climate change and least abundant for the fisheries. These two issues made it challenging for the author to identify the role of least developed states in the global fisheries regime; however, it is not likely that the information would significantly alter the findings.

Conclusion

This chapter has provided an overview of the literature concerning institutional density and regime complexes. The flaws of this literature are threefold: it includes only work in which regime complexes are present; it does not take into account how institutional constraints shape actors' behaviors; and it lacks an account of various processes of institutional change. The innovation of this dissertation project is its framing of regime complexity as a process of international political development, which focuses on the processes that create, reproduce, and change international institutions over time. The theory this chapter puts forward argues that radical institutional change is difficult to achieve and that focal institutions tend to stay in place even when states actively try to undermine them. When change does occur, it is triggered by the dissatisfaction of the institutional status quo. It can develop through the processes of displacement, layering, and conversion. Each of these can result in greater regime complexity but in various ways. The next three chapters will implement the research design outlined in the previous section to test the implications of the theory in the cases of ozone depletion, climate change, and marine living resources depletion.

CHAPTER 3

THE OZONE REGIME

In 1974, two scientists presented some starling findings relating to the stratosphere. Their research suggested that a family of industrial chemicals known as cholorofluorocarbons (CFCs) were depleting the ozone layer, which protects the earth from ultraviolet radiation. CFCs are cheap and versatile chemicals: they make good refrigerants, propellants in aerosol spray cans, and industrial solvents. First applied in 1928, their production and use grew exponentially over the following decades and into the 1970s.[163] The implications of the scientists' findings were therefore significant, as greater exposure to ultraviolet radiation can threaten human health by increasing the risk of skin cancer, cataracts, and immune disorders, and can interfere with the planet's ecosystems as well.[164] A decades-long debate between chemical corporations, the scientific community, politicians, and environmentalists ensued.

International discussions on ozone depletion resulted in the 1985 Vienna Convection for the Protection of the Ozone Layer. Today, the ozone regime continues to be highly integrated and coherent, presenting low levels of complexity. At its center lie the framework convention and the Montreal Protocol on Substances that Deplete the Ozone Layer. State parties have adopted four amendments to the Protocol and have made several more minor adjustments to it.[165] All of these instruments have received universal ratification. How is it that the ozone regime has continued to evolve without growing more complex over time?

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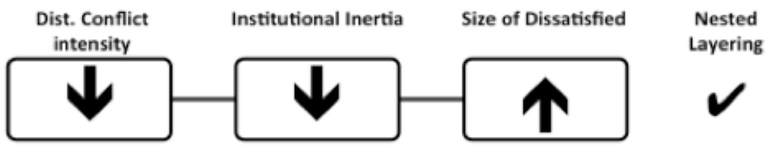
[163] Parson 2003, 20-22.
[164] Litfin 1994, 56.
[165] Ozoe Secretariat 2015.

There were three important periods in the evolution of the ozone regime. The first took place during the mid-1970s and early 1980s. This time was marked by institutional

Figure 3.1: Independent variables and development processes



selection, with a number of international bodies engaging in ozone-related activities; however, there was no significant progress towards the construction of a regime. The second period occurred during the mid-1980s to 1990. It was during this time that the framework convention, Montreal Protocol, and its London Amendment were established. The institutional decisions states made during this period of regime formation have been largely responsible for the regime's coherence. First, states purposefully designed the Montreal Protocol to be flexible, establishing a two-thirds majority threshold for the adoption of an amendment and making it even easier to implement adjustments. These decisions have resulted in low institutional inertia. Second, the London Amendment established a funding mechanism for developing states. This mechanism incentivized developing states to participate the regime; however, it also became a source of status quo dissatisfaction, as funding levels would need to be renegotiated every three years. Industrialized states, for their part, continued to seek global regulations that are consistent with their domestic policies. This second period therefore created a system that incentivized all important actors to remain committed to the focal institutions. The Montreal Protocol and the London Amendment allowed industrialized states' chemicals industries to maintain their competitive edge internationally, while rewarding developing states for their commitments through a funding mechanism. This allowed dissatisfied actors to form a large coalition relative to the number of veto actors in the focal institution.[166] Because the intensity of distributive conflict associated with ozone depletion is low, the coalition has been able to agree on a mutual path towards institutional change.

Because of the low intensity of distributive conflict, low institutional inertia, and large coalitions of the dissatisfied, institutional choices during the third period of the ozone regime have resulted in nested layering. State parties have adopted three additional amendments – Copenhagen in 1992, Montreal in 1997, and Beijing in 1999 – that, because they are nested within the Montreal Protocol, have not affected institutional integration. There is also no indication that these amendments have generated any norm conflict within the regime. Finally, each amendment has been ratified by all of the Protocol's state parties, so they have not affected actor constellations.

This chapter proceeds with a historical overview of the emergence of ozone depletion as a global issue. It demonstrates how states' domestic responses or lack thereof to the emerging problem shaped their strategies in the international arena. After a decades-long period of forum shopping, states chose to pursue a global convention under UN auspices. The chapter will analyze the moments of regime formation and identify the distributive conflict and political cleavages that emerged during negotiations for the Vienna Convention, Montreal Protocol, and London Amendment. It will demonstrate how the new status quo established by these institutions shaped the subsequent processes of institutional development, which resulted in nested layering and little regime complexity. The chapter ends with concluding remarks.

[166] Developing countries who receive funding make up 147 of the Protocol's 197 members.

Timeline of Key Events and Developments in the Ozone Regime

- 1974 scientists publish first findings linking chlorofluorocarbons to ozone depletion
- 1975 US and Canada choose NATO's CCMS and OECD as first venues for ozone discussions
- 1975 UNEP Governing Council begins work on collecting and disseminating scientific research on ozone depletion
- 1976 UNEP meeting produces "World Plan of Action on the Ozone Layer"
- 1977 first regulation of CFC uses in Sweden
- 1977 UNEP establishes Coordinating Committee on the Ozone Layer
- 1978 first regulation of CFC uses in US
- 1979 first regulation of CFC uses in Canada
- 1980 UNEP Governing Council calls for international ozone treaty
- 1985 43 states sign Vienna Convention on the Ozone Layer
- 1986 negotiations for ozone protocol begin
- 1988 Vienna Convention enters into force
- 1988 scientific consensus emerges about CFC-ozone relationship
- 1989 Montreal Protocol enters into force
- 1990 state parties adopt London Amendment, which establishes Multilateral Fund
- 1992 state parties adopt Copenhagen Amendment
- 1995 state parties adopt Vienna Amendment
- 1997 state parties adopt Montreal Amendment
- 1999 state parties adopt Beijing Amendment

Issue Formation and History: Domestic Policies and Institutional Selection

Domestic Policies

Countries' initial positions towards international action on ozone depletion generally mirrored their domestic policy preferences. The United States emerged as an early leader on the issue, domestically and internationally. The US was the single largest producer and consumer of CFCs in 1974, the year the hypothesis linking the chemicals to ozone depletion became public.[167] Naturally, both producers and users of CFCs opposed any regulations.[168] Yet, concern over the stratosphere was not a new issue in the US. A federally subsidized program to develop commercial airliners that could fly at supersonic speed in the stratosphere raised concerns about stratospheric pollution as early as the 1960s. By 1971, scientists warned Congress of potential ozone loss that could occur if such airliners were to enter commercial service.[169] The debate over these supersonic transports would go on to influence the US response to ozone depletion in two ways. First, government-sponsored research undertaken to assess the potential effects of the airliners increased US capacity for stratospheric science.[170] Second, scientists raised the alarm over the possibility that ozone depletion from supersonic transports would increase UV-radiation, thereby creating greater skin cancer risk.[171]

The CFC-ozone theory came out just as a major research effort coordinated by the Department of Transportation on the potential impact of supersonic transport on the ozone and climate came to completion. Thus, it added another dimension to an ongoing

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[167] Stoel, Miller, and Milroy 1980, 214-215. At the time, the US was responsible for over half of CFC production in OECD countries.
[168] Morrisette 1989, 803.
[169] Parson 2003, 26-27.
[170] Ibid., 30.
[171] Morrisette 1989, 800. A scientist testifying before a House committee claimed that a full fleet of supersonic transports would lead to an additional ten thousand cases of skin cancer annually. See Special to the New York Times 1971.

debate, garnering the attention of the press, the National Academy of Sciences, and environmental advocacy groups. By December 1974, Congress held hearings on CFCs and the ozone layer and two bills aimed at restricting the largest use of CFCs, in aerosol sprays, were introduced.[172] As Congressional activity continued over the next two years, public awareness of the problem spread more than anywhere else in the world[173] and sales of aerosol sprays began to drop significantly by 1975.[174] Prompted by weaker sales and the passing of CFC legislation in California and other states, the chemical industry moved towards developing new propellants for spray cans.[175] By the time the federal government implemented regulations against nonessential aerosols in 1978, consumption of aerosol CFCs had fallen by nearly seventy-five percent.[176] Industry groups pressured policymakers to advocate for international regulations, since their foreign competitors continued to enjoy the economic benefits of the chemicals.[177] The US government heeded the call and began pressing other countries to enact similar bans.[178]

The US experience with CFC controls would go on to influence other countries that early on took regulatory measures, and who would become important allies in international negotiations. The development of ozone policy in Canada in the 1970s roughly followed the timeline of the American experience, although there are two important differences between the countries. Canada accounted for approximately just

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[172] Parson 2003, 32. At the time, around sixty percent of CFC consumption occurred in the form of aerosols. See Stoel, Miller, and Milroy 1980, 214-215.
[173] The Netherlands were the only other country in which the issue gained high salience. See Benedick 1991; Downing and Kates 1982, 269.
[174] Parson 2003, 36.
[175] Benedick 1991.
[176] Parson 2003, 36.
[177] Roan 1989, 101.
[178] Parson 2003, 45.

two percent of CFC production.[179] Additionally, the ozone issue lacked the political salience it had achieved in the US at the time. Canadian scientists took part in ozone research and discussions in the United States and prompted their policymakers towards action. In response, the federal government established an Advisory Committee on Stratospheric Pollution. Following the Committee's recommendation to regulate ozone-depleting substances in 1976, the government and the aerosol industry engaged in consultations that resulted in an agreement on a voluntary reduction in the industry's use of CFCs. The industry preferred harmonization with US regulatory measures to avoid dumping of US aerosols on the Canadian market. Official legislation to control CFC aerosols was enacted in 1979.[180]

Sweden also enacted regulations against ozone-depleting substances in 1977. It formulated its fluorocarbon policy based on research conducted by the US National Academy of Sciences. Additionally, Sweden used the US domestic aerosol ban proposals as a model for timing and coverage of its own controls.[181] Yet for Sweden, regulation did not impose significant costs. Its CFC production was nonexistent and usage was relatively small. According to OECD estimates, only five hundred Swedes were employed in the aerosol industry,[182] compared to 780,000 in the US sector.[183] Given the small market for CFCs, why did the Swedes bother to act? In 1973, Sweden passed a new toxic substances law, giving its government wide powers to regulate products based on the precautionary principle; a mere suspicion of risks to human health or the environment

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[179] Stoel, Miller, and Milroy 1980, 101.
[180] Parson et al. 2001, 239; Stoel, Miller, and Milroy 1980, 101-104.
[181] Stoel, Miller, and Milroy 1980, 170-171.
[182] Ibid., 167.
[183] Jachtenfuchs 1990, 261.

is grounds for regulation.[184] Sweden's Nordic neighbors Denmark and Norway, also non-producers, banned CFC use in aerosols as well around the same time.[185] Due to their high latitudes, these countries were particularly susceptible to the effects of ozone loss.[186]

Outside of the Nordic countries, there was not much interest in Europe for the regulation of ozone-depleting substances. Economic interests provide much of the explanation for this trend, as in 1976, European industry accounted for around forty percent of global CFC production.[187] The largest producers, in order, were the Federal Republic of Germany, France, the United Kingdom, Italy, the Netherlands, and Spain.[188] France, the UK, and Germany were especially opposed to regulatory action. Prior to the recognition of the CFC problem, France and the UK had collaborated on development of their own supersonic transport aircraft and had engaged in a dispute with the US government over access to American markets once the US put its project on hold. With this conflict in mind, the French and British were suspicious of US motivations regarding the ozone layer.[189] Additionally, the issue salience of the problem was relatively low throughout Europe; the kind of activism by organized environmental groups that pressured the US government towards action was lacking.[190] Although West Germany and the Netherlands would gradually soften their positions, France and the UK vehemently opposed international controls through the mid-1980s.

Institutional Selection

[184] Ibid., 160.
[185] Morrisette 1986, 806; Benedick 1991, 24.
[186] See Roan 1989, 232.
[187] Benedick 1991, 26. The US produced about the same amount at the time, but the scale was tipping more heavily towards greater European production.
[188] Benedick 1991, 26.
[189] Morrisette 1989, 804.
[190] Benedick 1991, 27-28.

Following its own aerosols ban, the US urged the EC to undertake similar action, worried that its regulations alone would have little effect and that and that European industry would gain a competitive advantage from continued production and use of CFCs.[191] Yet France and Britain acted to block any meaningful progress on the ozone issue in the European Community (EC). Some European governments hoped that delaying international controls would spur additional regulations in the US, which would reinforce their competitive position.[192] The EC did adopt a resolution in 1978 proclaiming that the ozone problem could not be ignored. Two years later, it adopted a resolution limiting the use of CFCs, but the policy was established in such a way as to have minimal effects.[193]

The first formal international actions on ozone depletion were initiated by the United States and Canada, which promoted the issue in multiple institutions. The United States' initial international institutional choices reflect the Nixon administration's broader strategy for addressing the global environment. In the early 1970s, a number of international organizations were active in aspects of the environmental policy sphere. These included the United Nations Educational, Scientific, and Cultural Organization (UNESCO); the World Meteorological Organization (WMO); the World Health Organization (WHO); and the Food and Agricultural Organization (FAO).[194] A report by the US Committee on International Environmental Affairs provides an assessment of global environmental problems and avenues for international cooperation. The report declares the administration's intent to opt for a "pluralistic approach," which meant

[191] Jachtenfuchs 1990, 263.
[192] Benedick 1991, 33.
[193] Jachtenfuchs 1990, 263.
[194] Train 1974, 179.

pursuing its environmental objectives in the United Nations, the OECD, and the North Atlantic Treaty Organization's Committee on the Challenges of Modern Society (CCMS).[195] The Nixon administration's rationale for adopting this approach appears functionalist in nature. According to Secretary of State William P. Rogers' instructions to US embassies and missions in relevant international organizations, each of the aforementioned organizations

> "has special and unique attributes, experience and potential for dealing with various aspects of environmental problems that will face us in the coming years. Each organization provides an important framework to facilitate United Stats cooperation with other nations […] The United States [should] encourage the fullest and most practical development of the special attributes within each organization" and should "give appropriate support to those developments which promise to have a genuine impact in solving environmental issues."[196]

The report of the Committee on International Environmental Affairs, which was composed of representatives from the Departments of State, Housing and Urban Development, and the Interior, as well as government scientific agencies, further indicates the importance of functionalist logic and rational design considerations. As the policymakers discuss possible institutional responses to global environmental problems, weighing the benefits of an independent versus UN-affiliated environmental agency, they repeatedly express their concern for the establishment of the most "effective" system. They write, "improvements for international cooperation may be insufficient unless they enable multinational organizations to execute programs which nations do not or cannot carry out alone and to enforce decisions which subordinate sovereign rights to human

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[195] Committee on International Environmental Affairs 1970, xx. The report notes that this strategy could create overlap between organizations and cites the need for effective coordination among them.
[196] Rogers 1970.

rights."[197] Cooperation on regional environmental problems, they conclude, "can be handled most effectively in regional organizations."[198]

In 1975, the US chose the CCMS and OECD as the first multilateral venues for discussions on the stratosphere. The Nixon administration was the driving force behind the creation of the CCMS in 1969. It viewed the activities of international organizations at the time as inadequate and rigid, and sought to establish a more flexible and action-oriented institution. The CCMS employed the pilot country procedure, requiring a county or a group of countries to take sole responsibility for conducting research, disseminating reports, and proposing action on any particular issue.[199] The Committee on International Environmental Affairs highlighted the functional advantages of the CCMS, concluding it "might prove to be particularly effective in initiating action programs" and could "become an exceptionally effective instrument."[200] Because of the structure of the pilot country procedure, the NATO secretariat was only minimally involved in the CCMS process.

In a 1975 CCMS plenary meeting, the Environmental Protection Agency's (EPA) Administrator Russell Train made the ozone issue the focus of his speech. He expressed the need to coordinate ozone-related activities across international organizations, and raised the possibility of an international convention to regulate human activities that are harmful to the stratosphere.[201] At the CCMS plenary meeting the following year, Train announced the United States' intention to regulate CFCs and urged all countries present

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[197] Ibid., xxii.
[198] Committee on International Environmental Affairs 1970, xi.
[199] Train 1974.
[200] Committee on International Environmental Affairs 1970, x.
[201] Train 1975.

to do so as well. He again spoke of the need to discuss international regulations.[202] Despite these efforts, ozone depletion did not receive further attention at the CCMS. Although the CCMS process was popular with US administrations, some countries, including other members of NATO, did not view the organization as an appropriate venue for environmental issues.[203] The Committee on International Environmental Affairs had indeed expressed concerns that its association with NATO could undermine its purpose.[204] Train suspected that the CCMS's limited membership – it did not include all industrialized states – and lack of bureaucratic support were also problematic.[205] These concerns for efficiency and effectiveness are further evidence for the importance of functionalist considerations in this early process of institutional selection. By 1976 international discussions on the ozone had begun in other forums, which were likely viewed as more fitting for the problem at hand.

Canada was the first nation to bring the matter of ozone-depleting substances to the attention of the OECD. A number of observers noted that the organization seemed like the best candidate through which to coordinate a regulatory response.[206] The OECD secretariat was the first to have its own environmental unit, the Environment Committee, which began operations in 1971.[207] At the time, all major CFC producers and consumers except the USSR were members;[208] between them, they accounted for eighty percent of CFC output. Canada first submitted a note to the Environment Committee in 1975 calling attention to ozone depletion and proposing that the OECD address the problem. The US

[202] Train 1976.
[203] Train 1974.
[204] Committee on International Environmental Affairs 1970, x.
[205] Train 1974, 189.
[206] See Bastian 1981; Stoel 1983.
[207] Busch 2009.
[208] Parson 2003.

submitted its own note on the issue shortly thereafter.[209] The Nixon administration had expressed a preference for expanding the OECD's scope into the area of environmental governance as early as 1970,[210] just as it had with NATO.[211] As with the CCMS, members of the administration emphasized the functional attributes of OECD, noting that it is "particularly well suited for dealing with the economic implications of environmental problems."[212] The Subcommittee on Stratospheric Pollution, created in 1975 by the State Department to coordinate US international activities on ozone depletion,[213] saw the OECD as a particularly appropriate forum to address CFC production, use, substitution, and especially regulation. It even pledged that the US would seek to provide the necessary resources to ensure the organization's success in this matter.[214]

In 1976, the Environment Committee adopted a plan of action, outlining its intent to investigate CFC substitutes, regulatory measures, and the potential economic impact of CFC controls. Yet despite this ambitious agenda, OECD activity on the ozone issue stalled[215] and no organization-wide policy position was adopted.[216] The US and its allies became concerned that opponents of CFC regulation would be able to delay or block action on the issue within the organization. They felt an ad hoc approach to the matter would prove more productive.[217] After failing to produce agreements on ozone depletion in other forums, Canada and the US again proposed for the Environment Committee to conduct a similar assessment on aspects of CFC use and regulation in 1980. Again, the

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[209] Ibid., 265-266.
[210] Greenwald 1970.
[211] Stoel, Miller, and Milroy 1980, 265.
[212] Committee on International Environmental Affairs 1970, xi; see also Greenwald 1970.
[213] Bastian 1981, 185.
[214] Department of State 1976.
[215] Parson 2003, 46.
[216] Bastian 1981, 183.
[217] Buchanan 1975; Parson 2003, 46; Stoel 1983, 66.

organization did not make much progress on the task. As the US and its allies had feared in the previous decade, many governments and chemicals interests were uncooperative, refusing to share information about technology, production, and cost. Additionally, the OECD lacked the technical expertise needed to conduct a thorough assessment.[218]

The UN Environment Program (UNEP) and World Meteorological Organization (WMO) were two other organizations active in the early years of the ozone debate; however, unlike the OECD and CCMS, their initial foray into the issue was the result of independent initiative rather than prompting by member states. A number of US diplomatic cables from the period make inquiries regarding the activities on ozone pollution already underway at the agencies.[219] It might seem that UNEP would be the logical venue for ozone policy, as it was created in 1973 to monitor and assess the state of the environment and coordinate relevant environmental activities within the UN system.[220] Its large membership would also bode well for wider participation. Yet UNEP had significant constraints: its budget was limited; its staff was small and positions remained unfilled until 1975; its location in Nairobi was inconvenient; and it had up to that point avoided specific environmental regulations, focusing mainly on issues relating to development.[221] Despite these obstacles, UNEP leadership and staff showed an early interest in the issue[222] and in 1975 funded a WMO technical conference on the state of research on ozone depletion.[223]

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[218] Parson 2003, 112, 139.
[219] Dale 1975; Kissinger 1975; Marshall 1975.
[220] Andersen and Sarma 2002, 43.
[221] Hill 1975; Stoel 1983, 66-67.
[222] Parson 2003, 46; Bastian 1981, 184.
[223] Benedick 1991, 40.

UNEP Executive Director Mostafa Tolba used the resulting WMO statement on the ozone to propose during that year's Governing Council meeting that UNEP start a new program to gather and disseminate research on the risks of ozone depletion[224] and CFC use in developing countries.[225] The US shared Tolba's vision for the role of UNEP and WMO. Primary documents once again suggest that the US was concerned with achieving the greatest efficiency in cooperation on ozone matters. While American officials continued to emphasize a role for the OECD, they also believed the WMO and UNEP "appear to be better equipped to carry out the [aforementioned] tasks" and "will also benefit to a greater degree in terms of furthering their overall institutional responsibilities and broader program of objectives."[226]

The Council approved Tolba's proposal, as well as one from the United States to convene an international scientific meeting on the ozone layer.[227] The Council did, however, reject a proposal made by Canada and Sweden, two activist countries on the ozone issue, that UNEP should convene negotiations for an international treaty to protect the ozone layer.[228] Not all Governing Council members were as keen for the organization to play a role in the ozone issue, expressing concern with potential overextension of its limited resources. Tolba also complained that there was a lack of technical assistance on the matter from those in a position to provide it.[229]

In 1976, the Governing Council approved a US proposal asking UNEP to "convene a meeting of appropriate international, governmental, and non-governmental

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[224] Report of the Governing Council 1975.
[225] Ingersoll 1976.
[226] Ingersoll 1976.
[227] Parson 2003, 46.
[228] Parson 2003, 112. In the next year's Governing Council meeting, the prospect of an international convention on the ozone was again raised by some members. See UNEP 1976.
[229] UNEP 1976.

organizations to review all aspects of the ozone layer."[230] The meeting, held in Washington, DC the following year, resulted in a "World Plan of Action On the Ozone Layer," which consisted of twenty-one specific proposals. It also identified a number of UN agencies that could lead particular research efforts, including the WMO, World Health Organization, the Food and Agricultural Organization, and the Department of Economic and Social Affairs. UNEP was assigned the task of coordinating these agencies and the "World Plan."[231]

Following the Washington meeting, UNEP Governing Council established the Coordinating Committee on the Ozone Layer (CCOL).[232] Composed of representatives of research programs, its role was to take stock of all aspect of ozone research. Governments seeking global CFC regulations hoped that the CCOL would foster the emergence of scientific consensus on the issue. For several years, it was the only international body doing this sort of work, but it was relatively ineffective. Members of the body were uncertain about its mandate and it also suffered from limitations due to its membership, leadership, and resources.[233]

It was at this point that the US attempted to steer ozone discussions away from formal institutions. Frustrated by UNEP's administrative limitations,[234] opposition to CFC regulation in the Governing Council, and lack of progress in the OECD, the US opted to pursue global action through a number of ad hoc discussions separate from any international organization.[235] These meetings took place in Washington, DC in 1977,

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[230] Ibid.
[231] Stoel, Miller, and Milroy 1980, 274.
[232] UNEP 1977.
[233] Parson 2003, 98.
[234] "Memorandum From Harry Blaney of the Policy Planning Staff to the Deputy Director of the Policy Planning Staff" 1977.
[235] Parson 2003, 47.

Munich in 1978, and Oslo in 1980, and mostly included large consumers and producers.[236] The first meeting occurred just as plans for US aerosol regulations were concluding. The US hoped to induce other attendees into implementing their own regulations by leading by example and thereby avoiding lengthy international negotiations.[237] This strategy worked on Sweden, at least. An observer noted that these meetings were at the time the "most important global mechanism with respect to fluorocarbon regulations."[238] Still, the ad hoc process proved to be ineffective and fleeting. There was a significant divide between activist nations advocating for CFC regulations and those claiming there was inadequate scientific evidence to support any action. Major CFC producers like Britain, France, and Japan did not even bother to attend all of the meetings. Those opposed to regulations disapproved of the US attempt to circumvent international institutions and even some other activist countries preferred the formal multilateral process.[239] The failure of the ad hoc process once again highlights the challenges agents of change face when attempting to alter the status quo in the presence of distributive conflict. As we see also in multiple instances in the fisheries case, the status quo powers can simply refuse to sign on to a new institution.

With the failure of the ad hoc process and a second unsuccessful attempt by Canada and the US to involve the OECD, attention again turned to UNEP. A delegation at the Governing Council called for the creation of an international convention to protect the ozone layer in 1980.[240] The following year, a number of delegations expressed their

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[236] The first meeting was attended by thirteen countries and five international organizations. All countries present except Japan signed a non-binding resolution supporting non-essential aerosols. See Parson 2003, 47.
[237] Cagin and Dray 1993, 221.
[238] Stoel 1983, 68.
[239] Parson 2003, 50.
[240] UNEP 1980.

support for such a convention. Although some stated that the science supporting action on CFCs was inadequate, the proposal was adopted. The Council also established an ad hoc working group of technical and legal experts to make progress towards the matter.[241] States supported the move towards a convention for various reasons. For some countries, it was the best avenue to securing international regulations. Reluctant CFC producers saw in the pursuit of a UN convention the possibility to delay concrete action in other forums. There were also those who feared a future CFC-related race to the bottom, with CFC-producers relocating from industrialized nations with regulations to developing countries with lax rules. While there was much disagreement regarding the timing, content, and administrative mechanisms for a convention,[242] most governments expected it to cover agreements on research on data collection rather than regulation.[243]

There are three main takeaways from the discussion in this section. First, the institutional selection process in the early era of global environmental governance lends support to functionalist expectations. When considering global environmental problems in the early 1970s, American officials repeatedly emphasized the importance of maximizing the efficiency of interstate cooperation across institutions. They made no reference to distribution problems; however, this was also a time when the distributive implications of environmental issues were not as evident. Still, even when specifically considering ozone problem in the mid-1970s, US policymakers appeared focused on selecting institutions and executing cooperative endeavors in ways that maximized the OECD's, UN's, and WMO's comparative advantage. Second, this section also demonstrates how distributive issues can serve as an impediment to the progress of

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[241] UNEP 1981.
[242] Bastian 1981, 194.
[243] Benedick 1991, 41.

cooperation and institutional change. Countries whose chemical industries would be impacted by global regulations effectively blocked the United States and Canada's institutional choices. They impeded the OECD's efforts through non-cooperation and resisted the United States' ad hoc approach, agreeing to the UN process only because they believed it would delay concrete action. Third, some scholarship suggests that forum shopping is a byproduct of a relatively contemporary institutionally dense international system populated by regime complex.[244] This assessment of states' institutional choices during the emergence of ozone depletion as a global issue suggests otherwise. Although there were many fewer international organizations in the 1970s,[245] states seeking institutional change had a number of options to choose from. Along with evidence discussed in chapter 4 on states' early choices in the formation of the fisheries regime, this suggests that foreign shopping is not a new phenomenon.

Regime Formation: The Vienna Convention, Montreal Protocol, London Amendment, and the Nature of Status Quo Dissatisfaction

The Vienna Convention and the Montreal Protocol

There was little precedent for the protection of the stratosphere in international environmental law.[246] UNEP quickly moved to fulfill its new mandate, convening a meeting of legal experts to establish a framework and methods for the development of such a new instrument in 1981.[247] Yet outside of the agency, any sense of urgency regarding the matter had dissipated. New scientific findings led many to believe that the

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[244] See Raustiala and Victor 2004, 295.
[245] The Yearbook of International Organizations counts 289 organizations in 1978, compared to 7756 in 2014.
[246] Cagin and Dray 1993, 252.
[247] Rummel-Bulska 1986, 117.

threat to the ozone had been overstated. CFC production had declined due to a global economic slowdown and a shrinking of the US aerosol market. And perhaps most importantly, the anti-regulatory Reagan administration had taken over in the US and appointed an EPA Administrator, Anne Gorsuch, who showed little concern for ozone depletion.[248] The Reagan administration's position on the global environment presented a sharp reversal from the previous four presidencies, which had assumed leadership in a number of international treaties and initiatives. In its second year, the administration drastically cut UNEP funding, eliminating ten percent of the agency's budget; originally, its request to Congress was to provide no funding at all.[249]

UNEP's ad hoc working group held its first meeting in 1982, with all major CFC producers and twelve developing countries attending.[250] Yet there were a number of obstacles standing in the way of progress, one of those being the US government. Whereas the Carter administration endorsed domestic controls as catalyst for international action, the Reagan administration vowed not to undertake further steps against CFCs at home until global regulations were in place; at the same time, it took the position that process towards an international convention should be slowed down.[251] American CFC manufacturers promoted this strategy of demanding international controls as a prerequisite for further domestic action.[252] Besides its ideological opposition to government regulations, the Reagan administration also believed that further action on CFCs, domestic or international, would cause significant economic harm.[253]

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[248] Benedick 1991, 42.
[249] Cagin and Dray 1993, 250.
[250] Parson 2003, 114.
[251] Cagin and Dray 1993, 251; 253.
[252] Roan 1989, 88.
[253] Cagin and Dray 1993, 251; Roan 1989, 105.

Along with the United Kingdom and France, the US argued that it was too early to discuss the contents of a convention at the first ad hoc meeting. Several delegations in attendance did not even display a basic understanding of the issue at hand, noting that *their* ozone layer was not under threat since they did not produce CFCs.[254] The only consensus to emerge from the meeting concerned the structure of agreements to protect the ozone layer. Delegates decided that a "framework convention" would establish common goals on cooperation and research, while specific regulations would be imposed through "protocols" and "annexes."[255] UNEP was instrumental in ushering in the framework convention/protocol approach to environmental governance. The first such instrument, the 1976 Barcelona Convention for the Protection of the Mediterranean Sea Against Pollution, which has several protocols, was negotiated under the auspices of UNEP.[256] In 1981, the Governing Council established the Ad Hoc Meeting of Senior Government Officials Expert in Environmental Law to create a framework and methods for the development of environmental law. The Meeting identified the ozone layer as one of three issues for which principles and agreements should be established, and called for the development of a global framework convention.[257]

Throughout the first three ad hoc meetings, Finland and Sweden were the biggest advocates of international regulations of CFCs. They repeatedly circulated a draft convention, later dubbed the Nordic Annex, which proposed a ban on nonessential aerosol uses of CFCs and other regulatory measures regarding ozone-depleting

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[254] Parson 2003, 114-115.
[255] Cagin and Dray 1993, 252.
[256] The 1979 Long-Range Transboundary Air Pollution Convention and 1979 Bonn Convention on Migratory Species, which was also concluded under the UNEP, are the two other framework-protocol precursors to the Vienna Convention. See Bodansky 2010, 186.
[257] Rummel-Bulska 1986, 117-118.

substances.[258] They were rebuffed most strongly by the US, UK, France, Japan, and the USSR, which argued that there was insufficient scientific understanding for such action.[259] But an important change took place in 1983: the Reagan administration agreed to a provision in the Nordic Annex calling for an international ban on nonessential aerosol uses of CFCs. This was the result of Anne Gorsuch's replacement by William Ruckelhaus, as well as much intra-agency wrangling within the EPA, which went on to pressure the State Department to change its position in international negotiations.[260]

In the following meetings, the US, Canada, and the Nordics, known as the Toronto Group, endorsed the creation of a protocol that would impose a global ban on the use of CFCs in spray cans, for which alternatives were already available; major European producers, as well as the USSR and Japan opposed this plan. With negotiations on the protocol in deadlock, delegates decided to focus on the convention, whose content was fairly uncontroversial.[261] The final text of the Vienna Convention for the Protection of the Ozone Layer, signed by forty-three countries in 1985, directs states to take measures necessary to protect the ozone layer. It also established a mechanism for cooperation on monitoring, research, and data sharing as they relate to the ozone layer and relevant chemicals. The Convention declares that it is up to the Conference of Parties (COP) to adopt protocols to the Convention.[262]

The delegates at the Convention left open the question of who would serve as its official secretariat. Although negotiations were convened under UNEP's auspices, the US and Canada preferred the WMO, viewing it as more technically competent and perhaps

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[258] Litfin 1994, 74.
[259] Parson 2003, 114.
[260] Roan 1989, 114-115.
[261] Benedick 1991, 45. The Convention does not identify any chemical as an ozone-depleting substance.
[262] Ibid.

disliking developing countries' greater influence in the body. The Governing Council eventually appointed UNEP as secretariat because the WMO did not express much interest and angered the activist countries by stating that there was insufficient scientific evidence on ozone depletion to support international CFC controls.[263] Since the issue arose in the 1970s, the WMO has shied away from policy, preferring to focus on research.[264]

The US, with the support of the activist governments, introduced a last-minute resolution during the Vienna negotiations authorizing UNEP to reconvene discussions to arrive at binding CFC controls by 1987. Prior to official negotiations, UNEP was to hold workshops to create a common understanding of factors affecting the ozone layer. At this time, there was still significant scientific uncertainty regarding ozone depletion. In 1986, the WMO and UNEP published what was then the most comprehensive report on the stratosphere. The study concluded that large future increases of CFCs in the ozone could be expected, but it could not with certainty conclude that loss to the ozone had occurred.[265] Indeed, from the mid-1970s through the mid-1980s, ozone depletion estimates varied greatly, ranging from as high as twenty percent depletion to none at all.[266] At the first UNEP workshop, there was considerable disagreement among delegates on current CFC production levels, their future growth rate, or the costs of potential controls.[267]

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[263] Ibid. 121 note 76; Benedick 1991, 46.
[264] Parson 2003, 46.
[265] Litfin 1994, 84-85.
[266] Roan 1989, 89.
[267] Cagin and Dray 1993, 304.

Yet the workshop idea, according to Richard Benedick, the lead US negotiator, "significantly influenced the subsequent history of the ozone issue."[268] He maintains that it was at another such meeting in Leesburg, Virginia that a common understanding for the need of an international ozone regime indeed emerged. Soviet and Japanese representatives accepted the need for global regulations.[269] The leader of the British delegation, whose government had opposed international action since the emergence of the ozone issue, stated that a new way of thinking had emerged.[270] To deal with the remaining scientific uncertainty, a new idea emerged at Leesburg: attendees agreed they could design a treaty that would call for periodic updates with the evolution of scientific evidence, whose controls could be revised accordingly.[271] This decision reflects functionalist and rational design logic, which expects that we should observe flexibility in the presence of uncertainty.[272] Shortly after the workshop, the Alliance of Responsible CFC Policy, a trade group representing about five hundred CFC users and producers, announced a new position. Although it had until then objected to any international regulations and attempted to block US participation in negotiations leading to the Vienna Convention,[273] the Alliance called on the US government to work towards achieving a global treaty limiting CFC production.[274]

Distributive Conflict and Political Cleavages

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[268] Benedick 1991, 45-47.
[269] Benedick 1991, 49.
[270] Litfin 1994, 92.
[271] Ibid., 50.
[272] See Koremenos 2005.
[273] Parson 2003, 114.
[274] Cagin and Dray 1993, 305.

Negotiations for an ozone protocol began in the winter of 1986 with twenty-five countries, most of them industrialized, in attendance. Two major negotiating blocs emerged as the same divisions that had defined ozone talks over the previous decade become apparent during the first meeting. States sought to construct an international regime that would mirror their domestic ozone policies. The Toronto group consisted of countries that had already enacted domestic controls and favored strong international controls, maintaining that further delay would have damaging effect to human health and the environment.[275] The EC negotiated on behalf of states that were against regulations. A key concern for the negotiating groups was the securing of competitive advantages for their chemical industries, although environmental concerns also played a role. A third group including Australia and some developing states was generally neutral, but would later move closer to the Toronto Group.[276]

The US was the most vocal member of the Toronto Group, comprised also of Canada, Norway, Sweden, Finland, Switzerland, and New Zealand. Prior to the negotiations for the ozone protocol, the Reagan administration crafted its official negotiating positions. It would seek to obtain (1) a near-term freeze of emissions of most ozone-depleting substances; (2) long-term emissions reductions of such chemicals, totaling as much as 95% reductions; and (3) a periodic review of the treaty's provisions based on evolving scientific knowledge, which could remove or add chemicals and update schedules and targets.[277] The administration faced strong pressures domestically to pursue these positions. For one, there was support for global regulations in the Senate,

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[275] Benedick 1991, 68-69.
[276] Ibid., 107.
[277] Benedick 1991, 53.

which passed a resolution, with a vote of 80-2, advocating for these measures.[278] Perhaps more importantly, the American chemicals industry also lobbied for international action. US producers preferred a global treaty that would bind their competitors to the status quo that placed them at a relative disadvantage via European producers.[279]

The European Community, supported by major CFC producers Japan and the USSR, formed the other main negotiating bloc. CFC producers, whose representatives sat on the delegations of some member countries, had significant influence over the policy positions of France, the UK, and Italy.[280] The stakes for European producers were arguably higher than for their American counterparts. Whereas a few major chemical companies dominated the US market, European producers were smaller and feared they would not be able to survive a CFC phase-out.[281] The UK, France, and Italy in turn shaped the EC's position.[282] Accordingly, the EC argued that cuts in CFC production could be delayed because significant ozone depletion would not occur for some decades. It also maintained that there were at that point no viable CFC substitutes, although it suspected that might not be true in the United States. The EC reasoned that proposals for strong controls coming from the otherwise anti-regulatory Reagan administration meant that US industry had developed CFC substitutes.[283] It is of note that not all EC members opposed progress on ozone protection. Denmark, Belgium, the Netherlands, and Germany, the only major producer, favored strong international controls.[284] Yet France

[278] Ibid., 62.
[279] Ibid., 64; Jachtenfuchs 1990, 265.
[280] Litfin 1994, 107.
[281] Roan 1989, 196.
[282] Parson 2003, 145.
[283] Litfin 1994, 108.
[284] Benedick 1991, 35.

and the UK were able to shape the EC's negotiating mandate[285] and also utilized the rotating EC presidency to slow down progress of the negotiations.[286]

The presence and engagement of developing countries increased with each successive round of talks; while only six attended the first round, they made up more than half of delegations participating in the fourth and final negotiations session in Montreal in June 1987.[287] It was only during that final round that the preferences of developing states, represented primarily by Argentina, Brazil, Egypt, Venezuela, and Kenya, crystallized.[288] These countries' per capita CFC consumption was small relative to industrialized states', [289] so they displayed little interest in the details of control measures.[290] But because domestic demand for CFCs was growing, developing countries demanded a grace period during which their consumption could increase. They also sought financial and technical assistance to move away from CFCs.[291]

In all, there were four rounds of negotiations, which occurred over a period of nine months. Attendance increased through each round of talks. The gaps between the Toronto Group and the EC remained large throughout the negotiations on every important issue;[292] nonetheless, delegates were able to agree on the provisions that constitute the Montreal Protocol on Substances that Deplete the Ozone Layer. The treaty mandated a freeze of production and consumption of identified ozone-depleting

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[285] Jachtenfuchs 1990, 265.
[286] Jachtenfuchs 1990, 266.
[287] Benedick 1991, 74.
[288] Benedick 1991, 69.
[289] Benedick 1991, 93.
[290] Benedick 1991, 72.
[291] Benedick 1991, 93.
[292] Benedick 1991.

substances and a gradual reduction of the chemicals by fifty percent.[293] In the face of new scientific findings, Parties could make adjustments to the control measures or list of substances regulated by the treaty; the changes would not need ratification by all Parties. Developing countries could delay implementation of the provisions by ten years and were promised access to CFC-alternatives and the necessary technologies. The treaty put in place trade measures against non-parties, prohibiting imports and exports of the chemicals.[294]

The US used the issue of trade to apply both domestic and international pressure to states opposing regulations. As mentioned, the Senate strongly supported an international ozone treaty. Perceiving the Reagan administration as wavering in its commitment, a number of Senators introduced legislation to ban imports containing CFCs. The United State's chief negotiator leveraged this threat to strengthen his delegation's negotiating position.[295] The possibility of US trade restrictions in the absence of an agreement indeed alarmed the EC and Japan.[296] The American delegation also introduced proposals to restrict trade in controlled substances with non-parties at the first round of negotiations. This was a deliberate attempt to induce other countries to join the protocol. The UK and EC refused to consider this issue until the secretariat of the General Agreement on Tariffs and Trade (GATT) commented on the matter.[297] This strategy did not work out in their favor, as legal experts from the GATT declared that

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[293] Jachtenfuchs 1990, 267. The fifty percent figure was considered as insufficient by the more activist countries, but was still seen as a victory considering the previous intransigence of France and the UK.
[294] Andersen and Sarma 2002, 85-86.
[295] Litfin 1994, 109.
[296] Morrisette 1989, 811; Parson 2003, 143.
[297] Benedick 1991, 91.

trade restrictions were in accordance with the treaty's provisions regarding the protection of human, animal or plant life, or health.[298]

A growing rift between the members of the EC was another factor that cleared the way towards consensus. Belgium, Denmark, the Netherlands, and Germany became increasingly in favor of strong international controls. Of these, only Germany was a major producer. Germany's position on ozone depletion was in line with those of the UK and France when the issue emerged. It saw calls for international controls as premature. Domestically, the German government showed little interest in regulating ozone-depleting substances, preferring instead to leave it to the industry to enact appropriate measures.[299] However, with time, Germany's stance evolved. Part of that can be attributed to the government's sponsoring of research efforts into ozone depletion. But more importantly, the environmental movement gained influence in the country over time, and the parliamentary elections in 1986 produced a significant number of votes for the Green Party. During negotiations for the protocol, Germany announced its plans to cut domestic production and CFC use and urged other EC members to do the same.[300] The country wielded its institutional power within the EC, when it held the presidency along with activist governments Belgium and Denmark during Montreal negotiations, to push other members towards accepting stricter controls.[301]

Belgium also took its turn in the EC presidency as an opportunity to promote stricter CFC controls. It convened informal talks with the US, EC, Japan, and USSR to make progress towards an agreement on reductions. These talks spurred a number of

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[298] Andersen and Sarma 2002, 79.
[299] Stoel, Miller and Milroy 1983, 122-124.
[300] Litfin 1994, 110.
[301] Benedick 1991, 36. The UK, on the other hand, had used its seat on the EU Presidency to slow down progress through the latter half of 1986.

other actors to action. The European Environmental Bureau, the continent's largest coalition of environmental organizations, organized a symposium on the protection of the ozone layer that was attended by the Commission's protocol negotiators. A few days thereafter, the European Parliament's Environment Committee called for a stark reduction of CFC consumption and production. An informal meeting of EC representatives to soften the stance of the hardliners soon followed and was successful.[302]

With ratifications by twenty-nine states and the European Commission, the Montreal Protocol entered into force on January 1st, 1989.[303] At this time, the ozone regime displayed low levels of complexity. The regime consisted of the Vienna Convention and the Montreal Protocol. The system of decision-making was comprised of the Conference of Parties to the Convention and the Meeting of Parties to the Protocol. The norms of the Convention and Protocol, geared towards reducing ozone depletion, were complementary. There was also a large overlap between state parties to the two treaties: only six states party to the Convention were not party to the Protocol when the Protocol entered into force.

London Amendment

After the adoption of the Montreal Protocol, the sources of status quo dissatisfaction were twofold. The theory presented in chapter 2 does not account for the first source: a change in exogenous conditions. The Protocol was negotiated under acute uncertainty, as ozone depletion was still only a theoretical problem at the time. Chief US negotiator Richard Benedick underscored this point:

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[302] Jachtenfuchs 1990, 266.

[303] Uganda, Egypt, Kenya, Mexico, and Nigeria were the only developing countries to have ratified the treaty at this time.

> "Both before and during the negotiations, major uncertainties surrounded such fundamental questions as the possible degree of future damage to stratospheric ozone, the extent to which CFCs and other chemicals were responsible, the prospective growth of demand for these chemicals, the significance of any adverse effects from ozone layer depletion, and the length of time before serious harm might occur."[304]

It was not until 1988 that scientists could say with relative certainty that a hole in the ozone layer discovered over the Antarctic was caused by CFCs and that ozone loss was occurring globally due to human activities.[305] This new scientific consensus galvanized domestic support for stricter controls in state parties. US Senators and environmental groups called on UNEP and American producers to support negotiations to strengthen the Protocol.[306] Environmental groups and both houses of Parliament also prodded the UK government to embrace further global controls.[307] Throughout Europe, a consensus emerged, and the European Council agreed to pursue a complete ban of ozone-depleting substances. The newly elected Bush administration quickly announced it would follow the Europeans in seeking an international ban.[308]

The second source of status quo dissatisfaction was a result of the distributive implications of the Protocol itself. The exact costs of the treaty's implementation, particularly the fifty percent reductions of CFCs, were unknown. Further, while a number of US industries had done some research on substitute chemicals, none were available at the time the treaty entered into force.[309] Still, the agreement "sent waves of concern throughout the entire realm of the CFC empire."[310] The Protocol changed the incentives of state parties' CFC producers. It signaled that the chemicals would not be viable in the

[304] Benedick 1991, 4.
[305] Cagin and Dray 1993, 355; Litfin 1994, 117.
[306] Roan 1989, 226.
[307] Benedick 1991, 114.
[308] Jachtenfuchs 1990, 267; 271.
[309] Parson 2003, 174-175.
[310] Monastersky 1988, 235.

long term and set off a race for substitutes. Producers who could adjust quickly stood to gain a competitive edge.[311] Indeed, American industry insiders believed they could make billions of dollars in profits by leading the transition away from ozone-depleting chemicals.[312]

Western producers also had their eyes on global markets. Although delegates included provisions in the Protocol that were meant to incentivize the participation of developing states, there was little interest on their end. Neither China nor India, for example, had signed the Protocol. Yet these countries represented a third of the world's population and had significant production capacity for ozone-depleting substances, as well as a rising demand for products containing CFCs.[313] If the status quo remained and states like these stayed outside of the ozone regime, European and American producers stood to lose major market share. For these reasons, important actors like DuPont,[314] the UK's biggest CFC producer,[315] and other major producers throughout the US and Europe changed their positions within months of the Protocol's entry into force, announcing their support for a complete phase-out of CFCs.[316] This change in industry position was important to securing a number of governments' support for global action.[317]

Distributive Conflict and Political Cleavages

Two months before the first Meeting of the Parties, the British government sponsored a conference on the ozone to lay the groundwork for treaty revisions. 123

[311] DeSombre 2000, 58; Gareau 2010; Roan 1989, 240-241.
[312] Roan 1989, 244; DeSombre 2000, 60.
[313] Sims 1996, 202.
[314] Monastersky 1988, 234.
[315] Jachtenfuchs 1990, 268.
[316] Benedick 1991, 118.
[317] See Jachtenfuchs 1990.

countries attended the London Conference, more than twice the number present at Montreal.[318] With industrialized states presenting a common front on broad phase-out goals, attention turned to the treatment of developing countries. The dimensions of the distributive conflict that dominated the negotiations for the Protocol's evolution are familiar to those studying global environmental governance: industrialized states sought to secure the commitment of developing countries, while developing countries wanted financial and technical assistance in return for their cooperation.

In London, China and India, neither of which had signed the Montreal Protocol, voiced their concerns with the treaty. Both countries possessed significant production capacity as well as rising demand for CFCs;[319] therefore, securing their cooperation was essential from the perspective of state parties. China's interest in ozone depletion began in the mid 1980s when, alarmed by scientific evidence, the Politburo sent observers to attend meetings of UNEP's ad hoc working group.[320] As the Protocol began taking shape, different concerns among Chinese ministries led to internal debates about whether the nation should become party to the treaty. After an evaluation of the costs and benefits of signing, the ministries agreed that China would not take such action until provisions were added to ensure financial and technical assistance to developing nations.[321] At the London Conference, China warned that unless it received assistance, it could become a major producer of ozone-depleting substances within a decade.[322]

The first Meeting of Parties in Helsinki played out much like the London

[318] At this time, in March 1989, three more states had ratified the Protocol: Singapore, Venezuela, and Liechtenstein. This brought the total number of ratifications to thirty-three.
[319] Sims 1996, 202.
[320] Zhao and Ortolano 2003.
[321] Oskenberg and Economy 1998.
[322] Tyson 1989.

Conference. Delegates generally agreed on future revisions to the treaty but financial assistance to developing countries proved to be a contentious issue. Developing countries, with the support of the Nordic states and New Zealand, issued a proposal for the establishment of a fund, but the major donor states rejected it. A special working group was established to consider the issue of a funding mechanism.[323] At the first meeting of the working group, there was little concrete information regarding the costs that implementing the Protocol would present for developing countries. Despite the uncertainty regarding costs, developing countries called for the establishment of a discrete trust fund that would be administered by UNEP. They agreed that the principle of "additionality" should be followed, meaning that developing countries should receive funds in addition to already existing aid flows.[324] These three issues – the costs of implementation, the institutional structure of the funding mechanism, and additionality – became the primary points of contention throughout the four meetings of the working group that lead up to the second Meeting of Parties.

Calculating the costs of accession to the Protocol for developing countries was a difficult task, due to variations in their ozone-depleting substances use and production capacities. Some governments presented overly inflated figures. India, for example, claimed it would need $2 billion in compensation. An analysis by the EPA estimated that $220-$260 million over the first three years of developing countries' accession would be needed. Industrialized countries could easily provide this sum.[325]

In their debates over the administration of a fund, developing and industrialized states displayed predictable institutional preferences. Developing countries preferred a

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[323] Litfin 1994, 130.
[324] UNEP 1989.
[325] Parson 2003, 204.

new fund that would be administered by UNEP, a body in which they had historically exerted more influence than industrialized states.[326] UNEP seemed eager to assume the responsibility, publishing a study that concluded the fund should be administered through the agency.[327] Yet large donor states like the UK, Japan, and the US preferred to channel the funds through the World Bank, an institution in which they held the majority of voting power. They objected to the creation of a new institution, which they viewed as an unnecessarily difficult and time-consuming task.[328] With time, a consensus emerged that a new institution would be necessary. Industrialized and developing countries agreed broadly on a multilateral fund that would draw on the expertise of UNEP, UNDP, World Bank, and other relevant agencies for the implementation of specific programs.[329]

The principle of additionality proved to be the final obstacle to the establishment of the multilateral fund. A number of industrialized countries, particularly the US, feared that the provision of assistance to developing countries in the ozone issue would create a precedent for a significantly costlier climate change fund.[330] Some suspected that this was part of UNEP Director Tolba's agenda.[331] Although it had earlier tacitly agreed to the principle, the US reversed its position on the eve of a working group meeting at which European governments were expected to propose a sum of $100 million towards a new fund, a quarter of which would be provided by the US.[332] The Bush administration now demanded that any funding for the Protocol come from the World Bank's existing sources. This new position was met with harsh criticism from a number of sources both in

[326] Caldwell 1990, 72.
[327] Andersen and Sarma 2002, 117.
[328] Benedick 1991, 155.
[329] Parson 2003, 204.
[330] Parson 2003, 204.
[331] Litfin 1994, 144.
[332] Weisskopf 1990a.

the US and internationally[333] and caused another reversal the next month. The US released a statement that it would support a new financial arrangement with additional resources under a number of stipulations: the fund would be "without prejudice to any future arrangements that may be developed with respect to other environmental issues;" it would be operated and administered by the World Bank; an executive committee, on which the US would have a seat, would be granted oversight of the fund; and voting on the committee would be weighted according to members' contributions.[334]

The final details of the multilateral fund were negotiated at the second Meeting of Parties in the summer of 1990. By that time, fifty-eight governments as well as the European Community had ratified the Protocol. Twenty-eight of these were developing countries, but they did not include China and India.[335] At US insistence, the text establishing the new fund stated that the mechanism was "without prejudice" to other environmental issues. Delegates agreed to an executive committee comprised of fourteen seats, with seven each accorded to industrialized and developing countries. The seats were to be rotated between states of certain geographic regions, but the US got its own seat. The US did not win the argument over voting power, however, as each member was accorded one vote. The World Bank got the primary responsibility of administrating and managing the fund. UNDP and UNEP were to provide research and technical assistance. Interim funding was established at $160 million over the first three years, which would be increased by $40 million each if China and India joined the protocol.[336]

The Indian delegation, headed by Maneka Gandhi, proved to be the most vocal in

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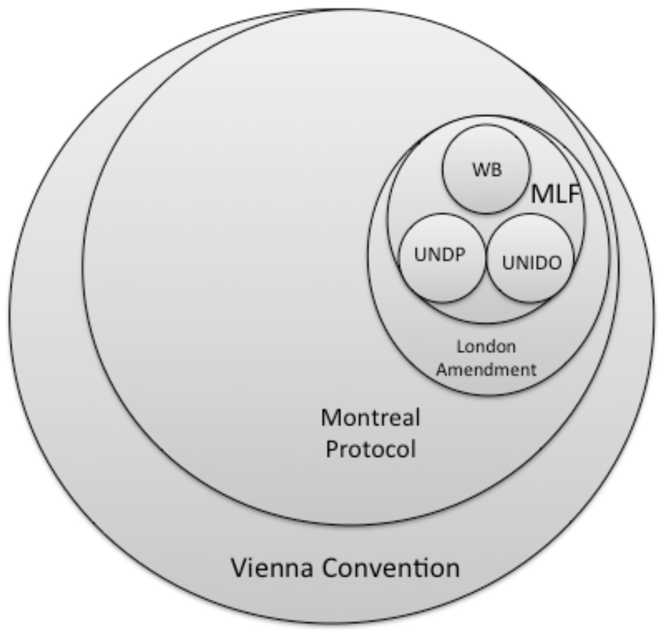
[333] These included the US Senate, editorials in major US newspapers, the chemical industry, the UK, the World Bank, and of course, developing countries. See Benedick 1991, 159-160; Parson 2003, 204.
[334] "Statement of the US Delegation" 1990.
[335] Benedick 1991, 161.
[336] Benedick 1991, 184-187; Parson 2003, 207.

promoting the interests of developing countries. Gandhi objected to the "small" amount of money offered through the fund, telling industrialized countries, "you made the mess, and now you can pay to clean it up."[337] Yet she expressed even greater concern over the noncommittal wording in the Protocol regarding technology transfer, which stated that parties would "take every practical step," and demanded a guarantee instead.[338]

Figure 3.2: Ozone Regime, 1990



Negotiations nearly broke down when Gandhi issued an ultimatum to industrialized states to provide developing nations the technology to produce ozone-friendly refrigerators, otherwise India would not accede to the treaty. Industrialized states argued that they could not guarantee technology transfer because of intellectual property rights issues. Although India was prepared to continue the standoff, it lost leverage when China suddenly broke their common stance by indicating it would sign the Protocol as was.[339] While Gandhi did not signal that India would do the same, the nation announced its

[337] Brown 1990b; Schoon 1990.
[338] Brown 1990a.
[339] Sims 1996.

intention to accede after the provisions agreed to at the conference went into force in 1992.

The London Amendment presented a significant elaboration of the ozone regime; still, its adoption did not contribute to greater complexity since its addition resulted in nested layering. Certainly, the creation of the Multilateral Fund drew a number of new institutions into the regime. Yet these institutions are highly integrated into the framework established by the Vienna Convention and Montreal Protocol. Parties to the Protocol govern the Fund's Executive Committee. The Executive Committee in turn has oversight over the MLF's secretariat, which is located with UNEP and carries out its operations. These include working with implementing agencies such as the UN Development Programme, UN Industrial Development Organization, the World Bank, and a number of bilateral agencies.[340] The adoption of the London Amendment also integrated actor constellations by broadening support for the regime. It led to an escalation of ratifications of the Convention and Protocol. Within five years of its adoption, the Amendment, Protocol, and Convention had 109, 149, and 158 ratifications, respectively. Today, all instruments have achieved universal ratification. Finally, the Amendment did not introduce any norm conflict into the regime.

Institutional Benefits

The London Amendment completed the ozone regime's early formation. Like the Montreal Protocol before it, the Amendment significantly changed the incentives of state parties. Industrialized states recognized that for the Protocol to have its desired effect, the participation of developing countries was necessary; however, the ten-year grace period

[340] Multilateral Fund for the Implementation of the Montreal Protocol 2016.

and potential trade restrictions were not sufficient to draw many in. The creation of the Multilateral Fund was vital to securing developing countries' cooperation and changing their incentives in regards to production and consumption of ozone-depleting substances.

In order to obtain funding, developing countries must create a country program that describes the institutional and policy changes they will pursue to achieve compliance with the Protocol. They must then report their progress on these measures annually to the Fund Secretariat. These stipulations have been effective at changing the behaviors of developing states, including those of important actors like China. The availability of funds drove Chinese officials to push for particular phase-outs even before Protocol deadlines because they believed early phase-outs would be less costly.[341] Through the fund, developing countries could reap broad benefits from their participation in the Protocol, as it allowed them to modernize their chemicals industries and achieve important environmental progress.

Industrialized states also benefitted form the London Amendment. In return for providing financial incentives to developing countries, they could continue to pursue phase-outs of ozone-depleting substances. While environmental concerns served as motivation, economic incentives were also important. Industrial states' chemical industries were at the forefront of development of substitutes for ozone-depleting substances. These potential gains could only be maximized if participation in the ozone regime was widespread. US producers made this clear when they openly lobbied the Bush administration to support the fund, stating that developing country participation was necessary for them to remain competitive in global markets.[342] Some benefits were also

[341] Zhao and Ortolano 2003, 715.
[342] Weisskopf 1990b.

more direct: much of MLF funding is spent on equipment, chemicals, and expertise from industrialized countries' industries.[343]

The adoption of the London Amendment presented an important evolution of the ozone regime, since it created a system in which the majority of states had a stake. It seriously reduced the incentives for states to defect or undermine the focal institution. Yet the London Amendment did not eliminate distributive conflict among state parties. Questions of how to adjust the Protocol in terms of future substances, phase-out schedules, and MLF replenishment remained to be settled.

Coalition of Dissatisfied after London

Since negotiations to construct an ozone regime began, industrialized countries have aimed to establish global regulations that mirrored those in place domestically. This continued to serve as a motivation to pursue institutional change. Yet the exact preferences of industrialized states in regards to specific chemicals and phase-out schedules varied in step with evolving scientific evidence as well as their producers' progress on substitutes.

The establishment of a funding mechanism was essential for attracting the broad participation of developing countries in the Montreal Protocol. In turn, the continued flow of funds was necessary to keep these actors satisfied with the regime. Yet the London Amendment made no such guarantees. The fund was initially created on an interim basis and would need to be re-authorized to remain operational. Beyond that point, there was no permanent formula for its funding levels; rather, these would need to be renegotiated and distributed in three-year intervals. The inability to secure permanent funding at levels

[343] DeSombre 2000, 62.

they have felt are necessary to adjust to the Protocol's controls has served as a constant source of dissatisfaction for developing countries. Had they received permanent funding, it is likely that developing countries would have turned into status quo powers, resisting any institutional changes that would yield further regulations. The need to replenish the fund has given industrialized states leverage to induce developing countries to cooperate on further revisions.

The importance of this mechanism cannot be overstated. Today, 147 of the Protocol's 197 parties are developing countries and they all receive assistance from the MLF.[344] In 1995, 108 of the treaty's 150 parties were developing states that presumably expected funding. These numbers, combined with industrialized states seeking to tighten controls, make up over three-fourths of state parties, creating a large coalition of the dissatisfied.

Institutional Inertia

Because states negotiated the Montreal Protocol under conditions of great uncertainty, delegates broadly agreed that the treaty should be reopened and adjusted as deemed necessary.[345] Periodic scientific, economic, environmental, and technological assessments would be conducted to identify any necessary changes. This flexibility was considered a major innovation at the time.[346] State parties can amend the Montreal Protocol with a two-thirds majority of the vote. Amendments are then subject to ratification and are only binding to those who ratify them once they have achieved an agreed upon number of total ratifications. A state cannot ratify an amendment without ratifying all previous instruments agreed to under the Vienna Convention.

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[344] Multilateral Fund website, 2016.
[345] Parson 2003, 162.
[346] Benedick 1991, 99.

Table 3.1: Montreal Protocol Ratifications, 1988-2016

Year	Nr. of Parties	2/3 of parties
1988	30	20
1995	150	100
2000	171	114
2005	189	126
2010	196	131
2016	197	132

An alternative to changing the Protocol is through adjustments. Like amendments, adjustments require two-thirds of state parties' consent, which must represent a majority of both industrialized and developing states. Adjustments are frequently used for control measures. In such cases, the two-thirds of parties must represent at least fifty percent of consumers of the chemical. Adjustments differ from amendments because they do not need to be ratified. Once they receive the necessary consent, they become legally binding to all parties, including states that did not vote for them.[347] This is a key difference between the Protocol and the institutional inertia of the Law of the Sea Convention, discussed in chapter 3, as the latter has no such adjustment mechanisms. Institutional inertia is low where two-thirds or fewer parties are necessary to change an institution, and this is the case with the Montreal Protocol.

Intensity of Distributive Conflict

The material interests that are implicated by the issue at hand are important for determining the intensity of status quo dissatisfaction. The greater the material costs the status quo imposes on the coalition of the dissatisfied, the higher their incentive to pursue

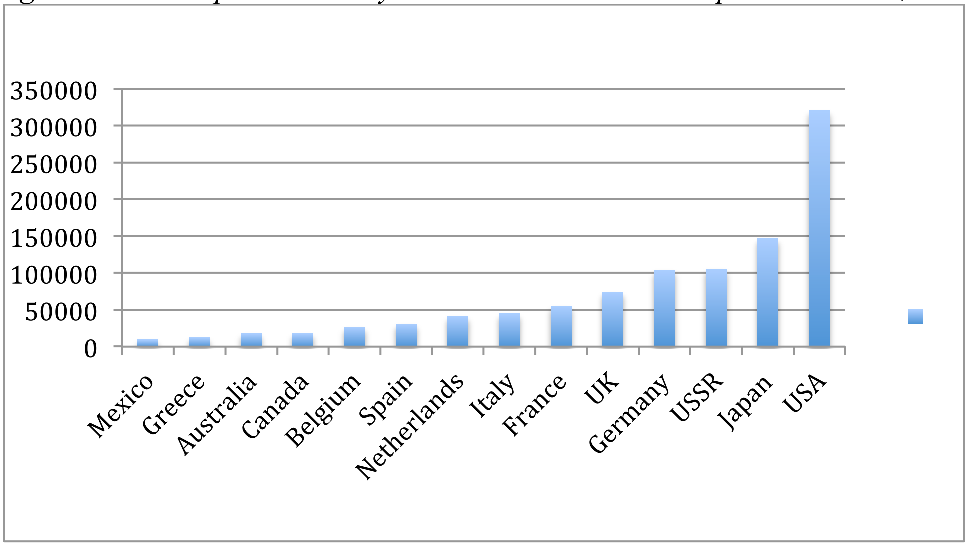
[347] DeSombre 2000, 53-54.

strategies that displace the focal institution. The intensity of distributive conflict among parties to the Montreal Protocol in the early 1990s appeared relatively minor.

The chemical industry's early prediction that economic doom would result from global regulations did not materialize. *Figure 3.3* shows that when the Montreal Protocol went into force, the United States was by far the largest producer of CFCs. To be sure, the Protocol imposed a number of burdens on the United States. An estimated five thousand businesses and 715,000 jobs relied on goods and services associated with the substances. Therefore, monetary costs resulted from the transition period away from CFCs in the form of layoffs, new equipment, and administrative costs.[348] Yet for DuPont, the United States' largest producer, cost of global controls was relatively minor. Although the company sold more than twenty-five percent of the world's CFCs, this amounted to less than two percent of its total sales.[349] By 1988, there was a general consensus in industrialized states that substantial total reduction in CFCs, totaling at least 50%, could be achieved relatively quickly and at little cost.[350] Overall, for developed countries, the early phase-outs of ozone-depleting substances cost much less than expected and caused fairly little disruption to industrial activity.[351]

[348] Roan 1989, 242.
[349] Roan 1989, 239.
[350] Benedick 1991, 119.
[351] DeSombre 2000, 51.

Figure 3.3: CFC production by Montreal Protocol state parties in tons, 1989



Source: UNEP Ozone Secretariat. Data are unavailable for a number of parties.

As discussed previously, industrialized states' major CFC producers quickly became more concerned with the potential profits to be made from the development and sale of ozone-depleting substances substitutes than from the losses they suffered from the Protocol itself. The Protocol imposed costs on them as long as the domestic regulations they faced were not reflected in global controls. So the question is, what does developing countries' participation in the Montreal Protocol cost? The answer is not much. The initial funding for the MLF, at $200 million over a period of three years, was a fairly minor expense for donor states, indicating that the intensity of distributive conflict in this issue is relatively low. Subsequent levels did increase, but the largest triennium funding to date is still modest at $507 million.

Expectations

The post-London Amendment status quo led to the creation of a large coalition of the dissatisfied, low institutional inertia, and low intensity of distributive conflict.

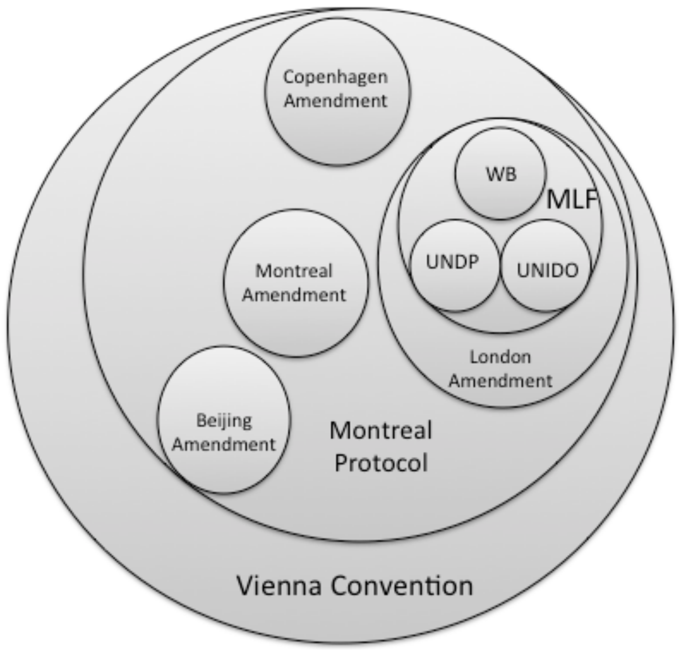
Because the intensity of distributive conflict is low, the agents of change should prefer to change the status quo through layering rather than dismantle it through displacement. We can expect the dissatisfied to prefer institutional change through amendment or adjustments. If they are successful, the process of change would be nested layering and would not contributive significantly to complexity.

Nested Layering: The Copenhagen, Vienna, Montreal, and Beijing Amendments and Adjustments

Since the adoption of the London Amendment, the Montreal Protocol has gone through four additional revisions via the amendment procedure as well as a number of adjustments. All four amendments were adopted in the 1990s and tightened control measures through larger reductions, earlier phase-outs, or the addition of new chemicals. On the whole, they did not generate greater complexity to the regime. Because of the low stakes of the distributive conflict, dissatisfied factions were able to form a grand coalition to overcome low institutional inertia and *change* the focal institution from within. Industrialized states were able to secure the commitments of developing countries by continuing to replenish the Multilateral Fund. The resulting process of change has been nested layering. Although it affected actor constellations for a period, it has overall not contributed towards greater complexity of the ozone regime.

Throughout the decade, assessments about the state of the ozone layer were dire. For example, the 1992 fourth Meeting of Parties that initiated the Copenhagen Amendment took place as scientists reported that the ozone hole over the Antarctic had expanded and for the first time reached some populated areas. Further, the seasonal ozone

Figure 3.4: Ozone Regime, 1992-present



readings for northern Europe, Russia, and Canada over the previous year were lower than they had ever been.[352] By the time state parties began negotiating the first amendment, the reduction of CFCs was no longer a point of contention. The majority of parties agreed that the chemicals should be eliminated by 1996.[353] Three points of contention emerged and continued to be a source of status quo dissatisfaction throughout the decade: the treatment of methyl bromide (MeBr), hydrochlorofluorocarbons (HCFCs), and the reauthorization funding of the MLF.

[352] Parson 2003, 219.
[353] Rowlands 1993, 26.

Methyl Bromide

Methyl bromide is a chemical used primarily for pre-plant soil sterilization. In the early 1990s, scientists estimated that global MeBr phase-outs were the most cost-effective and ozone-saving regulation available at the time. Historically, the United States has been the largest producer and consumer of the substance. In 1991, forty percent of global MeBr was used in the US, half of which went to the treatment of two crops: California strawberries and Florida tomatoes.[354] Domestic factors drove US support for global controls. First, there was great worry about the development of a hole in the ozone over New England. This led the Senate to unanimously call for a phase-out of ozone-depleting substances as fast as possible.[355] Second, regulations enacted under the Clean Air Act called for a domestic phase-out by 2000. As a result, the United States, supported by a number of industrialized states, sought a complete global phase-out of MeBr during negotiations for the Copenhagen Amendment.[356]

France and Israel, both home to large MeBr producers, did not want to consider any cuts at Copenhagen.[357] Developing countries were also against regulating the chemical. Their complaints were closely tied to the funding mechanism, discussed in more detail below. The use of MeBr had been increasing in the developing world, and countries worried that controls would decrease supply and increase costs. They were also concerned that controls would result in non-tariff barriers on their agricultural exports.[358] The final outcome at Copenhagen presented a compromise. Industrialized states agreed to

[354] Gareau 2013, 85.
[355] Gareau 2013, 84.
[356] Gareau 2010, 222.
[357] Grareau 2010, 223.
[358] Rowlands 1993, 28.

freeze their methyl bromide production and consumption by 1995. Developing states' use of the chemical was unaffected.[359]

The US continued to push for a MeBr phase-out during the next round of negotiations for the 1995 Vienna Amendment. It was not alone, as a Danish resolution also calling for a phase-out gained sixteen supporters, including Canada, the UK, and Germany.[360] However, domestic conditions in the US had shifted somewhat, and the government faced increasing pressure to soften its position. In order to compete with European and later Chinese producers, the US agricultural industry needed continued access to MeBr.[361] The pressure of agricultural interests, including the Department of Agriculture, had already resulted in the loosening of domestic regulations and would shape the final outcome of the Vienna Amendment. Although the treaty created an incremental phase-out schedule of MeBr for industrialized states, it allowed for an exemption for "critical agricultural uses." The amendment also included provisions for a future freeze in MeBr production and consumption in developing countries.[362]

During the next round of negotiations, for the 1997 Montreal Amendment, there was greater agreement on implementing a faster phase-out schedule for MeBr. The US continued to seek exemptions for "critical uses." The amendment declared that the use of a chemical was to be judged as critical if no viable alternatives were available and if its elimination resulted in "significant market disruption."[363] The critical use exemptions (CUEs) would continue to be a source of conflict through the mid-2000s, both between the US and EU and between the US and developing countries.

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[359] Gareau 2010, 235.
[360] Parson 2003, 222.
[361] Gareau 2013, 193.
[362] Gareau 2010, 233-234.
[363] Parson 2003, 233.

A number of countries, including Australia, Canada, Japan, and Israel, sought out CUEs.[364] Yet the largest and most controversial requests for exemptions came form the US. The US sought CUEs, primarily for strawberry production, over periods lasting multiple years, arguing that there were no economically feasible alternatives to MeBr.[365] Domestic pressure for this position was strong. In 2003, 21 members of Congress introduced a bill that would allow the Environmental Protection Agency to authorize MeBr exemptions even if these were rejected at the Meeting of Parties to the Montreal Protocol. Rumors of a possible US withdrawal form the Protocol circulated among parties that same year, although these were denied by the US.[366] This is the only available evidence of any state possibly intending to deflect from the focal institution.

The EU called for a reduction in the scale of critical exemptions, as well as for annual CUE reviews.[367] There was frustration among EU members that those who had invested in MeBr alternatives were not rewarded for their efforts, while American producers, who had not, benefitted from their intransigence.[368] Developing countries also feared that the exemptions gave US agricultural producers an unfair competitive advantage.[369] Yet these states continued to approve exemptions for the US and others. It is possible that they were alarmed by the whispers of a US withdrawal, since the US has over time been the largest single contributor to the Multilateral Fund. The methyl bromide controversy eventually died down by the end of the 2000s, as stockpiles and critical use request decreased.[370]

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[364] Depledge 2010, 277.
[365] International Institute for Sustainable Development 2004c, 7.
[366] International Institute for Sustainable Development 2003, 12.
[367] International Institute for Sustainable Development 2004c, 7.
[368] International Institute for Sustainable Development 2004d, 12.
[369] Gareau 2013, 179.
[370] Depledge 2009, 277.

Hydrochlorofluorocarbons

HCFCs were among an early group of chemicals developed by large American and European firms to serve as CFC substitutes.[371] Although much less damaging to the ozone than CFCs, HCFCs have ozone-depleting potential and were thus considered for controls during the Copenhagen Amendment negotiations. Most European producers had already begun to move away from the chemicals at the time, so the EC sought relatively strict imminent controls. The American delegation favored a less onerous timetable, since US producers were still heavily reliant on HCFCs. The American position prevailed.[372] HCFCs would continue to cause friction in the ozone regime, as the Europeans and Americans remained far apart in successive rounds of Protocol amendment negotiations.

The EC was able to secure tighter HCFC controls for industrialized states through each successive amendment, but two new related challenges appeared by the early 2000s. First, production and consumption of the chemicals began to rise in developing countries, which had received a later deadline for a HCFC freeze. By 2007, China had become the world's biggest country producer of the chemicals.[373] As their use of the chemicals increased, developing countries resisted industrialized states' attempts at securing faster reductions. Second, hydrofluorocarbons (HFCs), substitutes used to replace HCFCs as controls tightened, are not damaging to the ozone but are a potent global warming gas and therefore contribute to climate change.[374] Indeed, the global warming potential of

[371] Parson 2003, 177.
[372] Rowlands 1993, 24.
[373] International Institute for Sustainable Development 2007, 12.
[374] Depledge 2007, 448.

some HFCs is thousands of times greater than that of carbon dioxide.[375] The question of which venue was appropriate for addressing HFCs created significant tensions.

HFC controls were adopted under the 1997 Kyoto Protocol and a number of actors preferred to address them through the climate regime. The most important of these included China and India. Already concerned about the financial implications of their HCFC phase-out commitments, these countries worried about the lack of availability of ozone-depleting substance alternatives with a low global warming potential.[376] Additionally, the Kyoto Protocol's clean development mechanism created financial incentives for developing countries to destroy HFCs, and China and India were taking advantage of these.[377] For these reasons, they did not agree to even formally discuss the matter of HFCs at the Meeting of the Parties until 2013.[378] Arab and Latin American countries supported China and India.[379]

Beginning in 2009, the US, Canada, and several small island developing states sought an amendment to the Montreal Protocol to allow for the control of HFCs under the ozone regime. Since climate threatens their existence, the motivation of the small island states is quite clear. Yet many developing states were mistrustful of the intentions of the US and Canada, since the former never ratified the Kyoto Protocol while the latter withdrew from it. They suspected that the US and Canada were trying to draw attention away from the UN climate change regime[380] or were motivated by the interests of their chemical industries.[381] Nonetheless, the amendment proposal gained interest over time.

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375 International Institute for Sustainable Development 2009b, 12.
376 International Institute for Sustainable Development 2010a, 13.
377 International Institute for Sustainable Development 2009a, 14.
378 International Institute for Sustainable Development 2013, 11.
379 International Institute for Sustainable Development 2013, 12.
380 International Institute for Sustainable Development 2007.
381 International Institute for Sustainable Development 2012a, 12.

By 2012, 106 states declared their support for the measure.[382] The G20 also released a statement supporting an HFC phase-out under the Montreal Protocol.[383]

The HFC issue remains unresolved, although it appears likely that an amendment proposal will pass. During the G20 summit, China and the US held bilateral discussions and the latter's position appeared to soften.[384] Bilateral talks between the US and India also led to the India softening its stance and introducing its own amendment proposal in 2015.[385] A more optimistic future outlook regarding HFC substitutes likely contributed to the countries' changing positions.[386]

Funding Mechanism

The Montreal Protocol's funding mechanism has continuously been a source of conflict among member states. Debates have ranged not just about the levels of funding but also about its relation to the MeBr and HCFC controversies. The London Amendment established the fund on an interim basis and three years of funding. A number of European states took the fund's reauthorization process as a chance to enact institutional change. The UK, Netherlands, Italy, and France all proposed that the MLF should be abolished and all ozone-related funding should be transferred to the Global Environment Facility (GEF). The GEF, established in 1990 by the World Bank, finances environmentally sustainable development projects. The Europeans claimed that having one centralized funding body would improve efficiency. They also clearly preferred the GEF because the World Bank, whose voting procedures give them greater decision-

[382] International Institute for Sustainable Development 2012a, 11.
[383] International Institute for Sustainable Development 2013, 12.
[384] International Institute for Sustainable Development 2013, 12.
[385] International Institute for Sustainable Development 2015, 14.
[386] International Institute for Sustainable Development 2013, 12.

making power than those of the fund, manages it.[387] Developing states balked at this proposal. They argued that the MLF had been necessary for their accession to the Protocol and would need to be maintained for their ongoing participation.[388] Finally, facing strong opposition from many parties, the Europeans relented on the GEF proposal and agreed to the establishment of a permanent fund and a total contribution of $113 million for the following year. After that, a new funding level would need to be negotiated periodically.[389]

Funding negotiations have been contentious throughout the history of the Montreal Protocol, with developing states generally asking for greater sums than industrialized countries were willing to commit to. Developing states have frequently used the tactic of refusing to accept stricter regulations unless they received guarantees that funding levels would be increased. This strategy has worked particularly well with regard to HCFCs, as the G77 and China have agreed to greater controls of the chemicals throughout the 1990s and 2000s only in return for continued replenishment of the fund.[390]

The creation of a permanent fund has been essential for securing states' continuing commitment to the Montreal Protocol. The benefit to developing countries is clear: the Multilateral Fund has provided financing to 147 of the Protocol's 197 parties.[391] For continued access to the financial mechanism, they accept controls they otherwise would not. For example, a delegate interviewed at a Meeting of Parties called the US position and claims on MeBr "ridiculous." When asked why their delegation did not openly voice its dissatisfaction, the individual replied, "We can't. We received a

[387] Parson 2003, 211; Rowlands 1993, 35.
[388] Rowlands 1993, 36.
[389] Parson 2003, 220.
[390] International Institute for Sustainable Development 2007, 12; Parson 2003, 227.
[391] International Institute for Sustainable Development 2011b, 13.

$500,000 loan from [the fund]. You know who funds the MLF, yes?"[392] In return for their investment, industrialized states are able to secure global controls that are more closely in line with those in place domestically. This allows their industries to remain competitive in international markets.

Conclusion

The ozone regime has maintained remarkably low levels of complexity over time. Much of the explanation for this lies in the bargains that were struck between developing and industrialized states early in the regime's creation. The creation of the Multilateral Fund has allowed industrialized states to continue to pursue stricter controls of ozone-depleting substances, which brought both environmental and economic benefits. At the same time, it has given developing states access to finance and technology, while also creating the same environmental benefits. The ozone institutions have incentivized all important actors to stay committed to the regime and refrain from institutional proliferation or forum shopping.

Still, status quo dissatisfaction has been present among state parties throughout the regime's existence and has served as the driver for institutional change. Developing states have had to bargain to extract financing from industrialized states for the Multilateral Fund every few years. For their chemicals industries to remain competitive globally, industrialized states have sought to achieve global ozone-depleting substances regulations that mirror those already in place domestically. Because of the low stakes of distributive conflict, the latter have been able to buy off the former and all have been able to agree on a mutual path forward in regards to changing the regime. The dissatisfied

[392] Gareau 2013, 178.

have formed a large coalition relative to the two-thirds of states parties required to change the focal institution from within. The combination of low intensity distributive conflict, a large coalition of the dissatisfied, and low institutional inertia has resulted in the process of nested layering through the adoption of four amendments to the Montreal Protocol. Nested layering as a process of institutional change produces the lowest levels of complexity, since it does not significantly affect norm conflict, institutional integration, or actor constellations.

In addition to lending support to the model of institutional development presented in this dissertation, the ozone case is indicative of the explanatory power of functionalist arguments. During the early process of institutional selection, before states settled on United Nations Environment Program as the venue for ozone governance, American policymakers showed a distinct concern for maximizing the efficiency of interstate cooperation. This was true of their general approach to global environmental governance in the early 1970s.

Further, the presence of uncertainty about the state of the world was key a factor in policymakers' institutional design decisions. States negotiated the Vienna Convention and Montreal Protocol under conditions of acute uncertainty. Estimates about the extent of ozone depletion, CFC production levels and future growth rates, and the costs of potential controls varied greatly through the mid-1980s. With this in mind, policymakers saw a clear need to make the Protocol flexible so that they could more easily adapt it to new scientific and economic developments. Over time, the science regarding ozone depletion became more precise – in 1988, scientists could confirm with certainty that ozone depletion was the result of human activity. Further, as regulations took effect and chemicals industries developed substitutes for ozone-depleting substances, the costs and benefits of the regulations became clearer. This case study therefore supports the functionalist expectation that the decision to establish a flexible focal institution and the decrease of uncertainty over time account for the low complexity in the regime.

Still, it is important to ask a counter-factual: would a flexible focal institution and decreasing uncertainty about the state of the world result in a regime low in complexity in the presence of high intensity distributive conflict? As discussed, the funding mechanism was imperative to securing developing states' cooperation and their acceptance of additional regulations. Funding discussions have been highly contentious throughout the regime's existence even though the sums industrialized states agreed to allocate have been modest; for a comparison, we can look to the $100 billion they have promised to mobilize for the Green Climate Fund. Thus, it is possible that in the presence of higher distributive conflict, agreement regarding the regime's evolution would have been much more difficult to achieve, both among industrialized state parties and between industrialized and developing states. This would have resulted in greater complexity over time, as has been the case in the climate regime.

How does the ozone case compare to the fisheries? Two findings are consistent across the cases. First, achieving institutional change through proliferation or pre-existing institutions can be challenging, even in issues marked by low intensity distributive conflict. During the early institutional selection process in the ozone case, the agents of change attempted to engage existing institutions like the OECD and NATO in ozone governance, but their efforts were blocked by status quo powers. An attempt to circumvent existing institutions by initiating an ad hoc process also failed, as the status quo powers simply refused to participate. Second, as evidenced also during the early institutional selection process, forum shopping is not a particularly new phenomenon. Beyond these two findings, the cases differ in one independent variable: the size of the coalition of the dissatisfied. The large coalition allowed the agents of change in the ozone regime to overcome the low institutional inertia and led to nested layering in the regime. The coalition was small in the fisheries case, so that the agents of change had to settle for institutional choices that led to conversion and overlapping layering, which created greater levels of complexity.

Finally, this case study also yields an important policy-relevant finding. It suggests that policymakers can incentivize states to participate in and remain committed to a set of institutions if the initial bargain leaves major constituencies satisfied and can be amended in response to future changes. This is no easy task, but if successful, such an approach can enhance the effectiveness of cooperation. It is possible that if the early institutions of the climate regime, discussed in the following chapter, had created better incentives for developing countries to agree to controls, this could have drawn in a greater commitment from important industrialized states like the US and in turn, made greater progress towards addressing the problem.

CHAPTER 4

THE GLOBAL FISHERIES REGIME

The world's fisheries are facing a basic problem: there are too many fishermen competing for a dwindling supply of fish. The Food and Agriculture Organization estimates that nearly 90% of global fish stocks are exploited at or beyond sustainable levels of production.[393] A number of factors contribute to this issue. Fisheries products are the world's most traded food commodity, and demand for them is increasing as populations grow and become wealthier. This demand drives advances in the development of fishing technology, which generates ever-greater yields. Governments' ineffective conservation efforts are not helping matters, and in some cases even encourage overfishing through the provision of subsidies. Other environmental issues like climate change, pollution, and threats to the ocean's biodiversity are exacerbating the problem.[394]

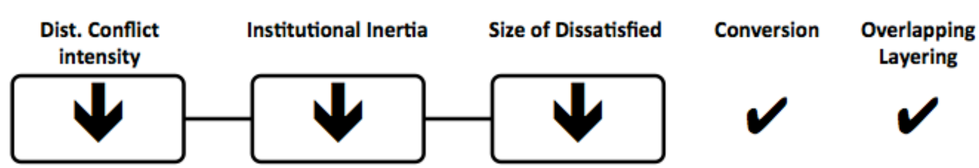
Concerns over the overexploitation of global fisheries emerged over half a century ago and were one of the factors that motivated states to establish new laws governing activities in the oceans. The resulting international regime for the management of the fisheries has undergone long periods of both stability and change. At its center lies the Third United Nations Law of the Sea Convention (LOSC). The LOSC established the exclusive economic zone (EEZ), a 200-mile area in which a state enjoys the right to natural resources beyond its coastline. The fisheries regime displayed low levels of complexity during its first two decades. The LOSC's core fisheries provisions were widely accepted by the mid-1970s, even before the convention's entry into force, creating

[393] Food and Agriculture Organization 2011.
[394] For an overview of the state of the world's fisheries, see Love 2010, chapters 1 and 3.

coherent actor constellations. Institutional integration was high, as the General Assembly served as the consensus decision-making body for fisheries law. The norms and rules across institutions within the regime were compatible.

Today, the LOSC is still recognized as the focal institution of the fisheries regime by all relevant actors; nonetheless, the regime has grown in complexity over time. The LOSC did not resolve questions surrounding the management and allocation of stocks in the high seas. This issue has continued to serve as a source of low intensity distributive conflict. A portion of the world's coastal states make up the coalition of the dissatisfied. They have steadily sought to change the regime in order to secure special rights over the high seas fisheries, but crucially, have shown no interest in replacing the LOSC's core fisheries provisions. This is because the EEZ's adoption has resulted in the enclosure of roughly 90% of global fish stocks, creating important stakeholders in coastal states. The coalition of the dissatisfied has been small relative to the two-thirds of parties necessary

Figure 4.1: Independent variables and development processes in the fisheries regime



to change the focal institution from within. Unable to change the LOSC despite its low inertia, the dissatisfied have pursued other avenues of change, embracing institutional proliferation and forum shopping. The resulting processes of change, overlapping layering and conversion, have generated only modest complexity over time. As *Table 4.1* indicates, actor constellations is the primary dimension of complexity that has been affected, as states have membership in and are supportive of various institutions for addressing fisheries issues.

The institutional proliferation strategies of the dissatisfied have resulted in three United Nations treaties, the most notable of which is the Fish Stocks Agreement (FSA). The creation of these instruments constitutes states' deliberate attempt to elaborate on rather than replace the existing system and therefore presents a case of overlapping layering. This layering has generated greater complexity in three ways. First, because it entails provisions that states and legal scholars deem incompatible with the LOSC, the FSA has introduced some normative conflict into the regime. Second, the FSA has fragmented actor constellations because fewer than half of the LOSC's state parties have ratified it. Because of the low number of ratifications, the FSA's delegation of fisheries governance to regional fisheries organizations constitutes a lowering of institutional integration.

The forum shopping strategies of the dissatisfied have led to the conversion of two institutions: the Convention on Biological Diversity (CBD) and the Convention on International Trade of Endangered Species (CITES). Although these institutions had previously been uninvolved in fisheries governance, the agents of change have succeeded in pushing the CBD and CITES to take minor steps towards addressing fisheries issues; however, they have not been able to secure any formal substantive changes to either institution. Many states have opposed the use of the CBD and CITES to address fisheries matters. This fragmentation of actor constellations has also contributed to greater complexity.

Table 4.1: Key post-LOSC institutions addressing fisheries issues, processes of institutional change, and affected dimensions of regime complexity

	Overlapping Layering			Conversion	
Institution	Code of Conduct	Fish Stocks Agreement	Regional Fisheries Organizations	Convention Biological Diversity	CITES
Institutional Integration			✔		
Actor Constellations	✔	✔	✔	✔	✔
Norm Conflict		✔			

This chapter explains the evolution of institutional development in the fisheries regime through an analysis of institutional choices taken at various points in time. It shows that conflict over the terms of cooperation served as the trigger for the institutional change. But, it also demonstrates that the kind of change that has taken place has been shaped and limited by the founding moments of the regime. Through the introduction of the EEZ, the LOSC changed the incentives of most actors in the international community in such a way that its central fisheries provisions have never been challenged. The LOSC also redefined the terms of distributive conflict, affected the preferences of the dissatisfied and status quo actors, and, through its own inertia, defined actors' institutional options. The institutional changes that have taken place over time have created a more complex regime, but only moderately so, as the LOSC and its core fisheries provisions remain firmly unchallenged at the center of the regime.

This chapter proceeds with a historical overview of pre-LOSC status quo and the forces and actors that laid the foundations for the emergence of a new focal institution. The following section analyzes the moments of regime formation and identifies the distributive conflict and political cleavages that emerged during the negotiations for the LOSC. It then shows how the adoption of the convention's fisheries provisions shaped

Timeline of Key Events and Developments in the Fisheries Regime

- 1949 International Law Commission begins work on law of sea
- 1955 Organization of American States hold special conference territorial seas
- 1957 UN General Assembly calls for conference on law of the sea
- 1958 First UN Conference on the Law of the Sea
- 1960 Second UN Conference on Law of the Sea
- 1973 Third UN Conference on the Law of the Sea
- Mid-1970s governments widely adopt Exclusive Economic Zone
- 1982 Third UN Conference adopts Law of the Sea Convention
- 1991 Chile and Argentina assert special rights in high seas
- 1991 Canada, Chile, New Zealand call for new rules on conservation in high seas
- 1992 UN Conference on Environment and Development adopts agenda calling for conference on straddling and migratory stocks
- 1993 FAO Compliance Agreement adopted
- 1994 Law of the Sea Convention enters into force
- 1994 Canada asserts special rights in high seas
- 1995 FAO Code of Conduct and UN Fish Stocks Agreement adopted
- 1995 Convention on Biological Diversity creates work program on coastal biodiversity
- 1997 US proposes the establishment of a Working Group on fisheries at CITES
- 1999 UN Open-ended Informal Consultative Process on Oceans and the Law of the Sea begins annual review of developments in ocean affairs
- 2001 UN Fish Stocks Agreement enters into force
- 2003 FAO Code of Conduct enters into force
- 2004 General Assembly establishes Working Group on Marine Biodiversity
- 2007 CITES establishes Working Group on flag and port states responsibilities
- 2010 EU and G77 make a joint proposal for a new LOSC implementation agreement

status quo dissatisfaction, including the size of the coalition of the dissatisfied, the intensity of distributive conflict, and institutional inertia. After laying out the framework's expectations, the chapter delves deeper into the case study, showing how the institutional choices of proliferation and forum shopping created overlapping layers and conversion in the regime. It describes the ways in which these processes increased complexity throughout. The chapter ends with concluding remarks.

Issue Formation and History: Customary Law, Forum Shopping, and the First and Second Law of the Sea Conferences

Customary Law and Forum Shopping

International law for the regulation of the world's fisheries falls into two distinct phases. The first phase was characterized by customary law, which emerged in the 17th century and lasted until the mid-1970s. The beginning of this period is associated with the work of Dutch legal scholar Hugo Grotius who, in 1609, published *Mare Liberum*. In this pamphlet, Grotius argued that natural law does not allow for any property rights on the high seas and as such, their common use should be unrestricted. His doctrine of the freedom of the seas became widely accepted and formed the legal basis of the high seas regime for the next three centuries. By the beginning of the 1800s, most states had also accepted the principle of territorial sovereignty – subject to the right of innocent passage to foreign ships – that extended three miles from the coast.[395] Thus, each state maintained exclusive access to the resources within the boundaries of its territorial sea, while the resources of the high seas were available to all. The matter of the contiguous zone – an area beyond the territorial sea in which states have some rights to the enforcement of

[395] Morell 1992, 2.

customs, sanitary, and immigration laws – never achieved customary status. While some states denied such jurisdiction existed at all beyond the three-mile limit, others claimed a range of such zones.[396]

Beginning in the 1940s, distributive conflict over the extent of the territorial seas disrupted the old customary law equilibrium. A number of Latin American countries, complaining that distant-water fishermen from the United States were exploiting their resources, unilaterally extended the breadth of their territorial sea. They framed their actions as a means of achieving distributive justice.[397] The US government, in turn, was alarmed by the extent of Japanese fishing off the Alaskan coast. As a result, it issued the Truman Proclamation of 1945, which asserted the United States' claim to the resources of its continental shelf.[398] The Proclamation set off a reaction of legal claims by other countries; within five years, more than thirty states had extended their offshore jurisdictions.[399] The most significant of these extensions came two years later in the form of the Santiago Declaration, through which Chile, Ecuador, and Peru established zones of 200 miles in which they claimed sovereignty. The three countries were motivated to take action because of fisheries issues, emphasizing their importance as food supplies and as factors in economic development.[400]

These events set off a debate regarding the management of the international fisheries, with the United States and Latin American countries becoming the most prominent voices. In these early stages, none of the key actors sought the creation of a

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[396] Churchill and Lowe 1983, 101-103.
[397] David and Digeser 1990, 5.
[398] The continental shelf refers to the part of the continental margin between the shoreline and landmass that extends from a continent to the shelf break, resulting in an area of relatively shallow water. A companion proclamation also asserted the United States' right to unilaterally impose fisheries conservation measures in adjacent high-seas waters, but it was never enforced. See Morell 1992, 4.
[399] Morell 1992, 4.
[400] Juda 1996, 114.

global fisheries regime. Chile, Ecuador, and Peru preferred that fisheries be dealt with through unilateral action via the extension of the geographic area coming under their jurisdiction.[401] The United States, however, saw the freedom of the seas as "essential to its national interests," according to the Department of State. Extensions of the territorial waters would limit both the movement of US warships and aircraft and its fishing industry's access to marine resources adjacent to the coasts of other states. Such a development would therefore be contrary to both the country's security and economic interests.[402]

These early conflicts highlight the multidimensional nature of marine issues. Regulation of marine resources – which is relevant to both economic and conservation concerns – is connected to the breadth of the territorial seas, the continental shelf, and high seas activities. A change from the status quo on any of these issues, particularly the territorial seas, would also affect many countries' security interests. The question of whether ocean issues could and should be addressed separately or through a unified framework emerged at the United Nations in 1949, when the newly created International Law Commission (ILC) identified the law of the high seas as a priority in need of codification. The ILC went on to draft recommendations on issues relating to the continental shelf, contiguous zone, and fisheries.[403] Once these oceans issues emerged on the global stage, the main concerned parties tried to accomplish two main goals. First, they sought to define the scope – whether the issues would be bundled together or addressed separately. Second, they attempted to place the issues on the agendas of their preferred institutions, at times through forum shopping. These early institutional

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[401] Ibid. 117.
[402] Phleger 1953.
[403] Anand 1982, 175.

preferences – weaker states seeking to address oceans at the General Assembly and the maritime powers trying to shift them to other forums and smaller regional institutions – are consistent with those described in regime complex literature that addresses more recent global issues.

US State Department memoranda from the time clearly show that the maritime powers, especially the US and United Kingdom, wanted to address each oceans issue separately. They were satisfied with the ILC's provisions on the continental shelf and were ready to proceed with those in the General Assembly. Yet these allies found the Commission's recommendations on the extension of the territorial sea beyond the three-mile limit unacceptable, and remained united in their opposition to it. They reasoned that their objections to claims of creeping jurisdiction in peacetime would strengthen their justification should they need to ignore it during wartime. To protect these vital security interests, the US and UK sought to isolate fisheries discussions from those relating to territorial waters;[404] according to a State Department Legal Adviser, this strategy would allow them "to divide [their] opponents" and "win or neutralize one of the issues at a time."[405] The US voiced its preference for dealing with fisheries problems through regional agreements on an ad hoc basis, an approach supported by its fishing industry.[406] The US and UK preferred to keep the subject out of the General Assembly's agenda. Instead, they tried to steer it towards the Economic and Financial Committee (Second Committee), which would treat the fisheries as an economic rather than legal problem. The maritime powers hoped that the Second Committee would place the fisheries on the

[404] U.S. Department of State 1953.
[405] Phleger 1954.
[406] Herrington 1955.

agenda of the more technical Food and Agriculture Organization (FAO),[407] which presumably would deflect the issue of the territorial waters. On the whole, it is clear that security and economic considerations were the primary drivers of the maritime powers' decision-making. These states were not concerned with designing the most effective instrument for oceans governance but rather with securing distributive advantages.

A number of Latin American countries, Iceland, and South Korea stressed the interconnectedness of the oceans issues. These states were primarily concerned with protecting their fishing industries, which they could achieve by tying fisheries conservation to the extension of territorial waters.[408] As with the maritime powers, these countries approached the important question of issue linkage from the perspective of achieving economic gains rather than designing the most effective treaty. Latin American states utilized the strategy of forum shopping, scheduling a special conference on the expansion of the territorial sea at the Organization of American States in 1955. Rather than risking precedent-setting action within an organization in which it felt outnumbered, the US decided to pursue discussions at the General Assembly, where officials made clear they expected the support of a number of powerful states with common objectives.[409] Still, they sought to have each issue addressed separately. Despite their efforts, US officials were unsuccessful in stopping the passage of a resolution – introduced by Iceland and supported by the Latin American states – that determined the General Assembly would address all parts of the ILC's draft articles on the codification of the law of the seas at the same time.[410] Reflecting on its inability to steer the UN

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[407] Herington 1955; U.S. Department of State 1954.
[408] Dulles 1954a; 1954b.
[409] Dulles 1954a; Herington 1955; U.S. Department of State 1954.
[410] Dulles 1954a.

agenda in the 1950s, a time when the organization's membership was more heavily skewed towards the West,[411] it is not surprising that the US government frequently displays an aversion to the institution's multilateral setting.

The US made one more attempt to isolate fisheries issues by sponsoring a technical conference on the matter in Rome in 1955. State Department officials hoped to appease Latin American countries by addressing their fisheries concerns and thereby avoiding broader law of the seas questions.[412] Yet Latin American states left Rome unsatisfied after being unable to secure special rights for coastal states in the management of fisheries. They pressed on at the OAS, which passed a resolution that proclaimed the customary three-mile limit on territorial waters insufficient.[413] Concerned that challenges to the freedom of the seas would continue in other forums in the absence of global action, the US relented. Along with twenty-two other states, the US sponsored a General Assembly resolution calling for an international conference to examine the law of the sea.[414]

The regime complexity literature implies that forum shopping is a new phenomenon made possible by growing institutional density.[415] Some scholars also see forum shopping as a strategy that primarily benefits the powerful.[416] The early developments in the modern fisheries regime are therefore somewhat surprising. Not only had states engaged in forum shopping in the newly institutionalized post-World War II era, but in this case, it was the less developed Latin American states that utilized the

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[411] The UN had 76 members in 1955 and was much more evenly balanced between developed and developing countries. See "Growth in United Nations Membership" 2015.
[412] Phleger 1954.
[413] U.S. Department of State "Editorial Note."
[414] Dulles 1957.
[415] See Raustiala and Victor 2004, 295.
[416] See Drezner 2013.

strategy successfully. It was their placement of oceans issues on the OAS agenda that led the United States and its allies to acquiesce to action in the General Assembly that would address all oceans issues comprehensively.

First and Second United Nations Law of the Sea Conferences

The first UN Conference on the Law of the Sea (UNCLOS I) was held in 1958, with 86 states in attendance. It addressed four areas of ocean governance, producing conventions on each one: the territorial sea and contiguous zone; freedom of the high seas; fishing and conservation in the high seas; and the continental shelf. The issue of the territorial sea – inherently connected to fisheries resources – was the most contentious, as it touched on both distributive and security dimensions. There were three political cleavages, which intersected with one another: coastal states-maritime powers, North-South, and East-West. Coastal states, the South, and East were broadly allied, although they differed in their exact interests and preferences.

Latin American states, particularly Chile, Ecuador, and Peru, and Iceland primarily represented the coastal state group. Latin American countries, many of which relied on coastal fishing as sources of income and food security, were at this time experiencing relatively severe economic difficulties, caused in part by a drop in exports of primary commodities as well as seafood.[417] Iceland's economic output greatly depended on the fisheries off its coast, which were increasingly being targeted by foreign

[417] Dean 1958, 609; 1960, 755. The stakes were particularly high for Peru. The country not only depended the fisheries directly for nutrition and income, but much of the supply of fertilizer of its agricultural sector came from the guano of sea birds.

fleets.[418] These states stressed the exhaustibility of marine living resources and raised questions about the allocation of available stocks. They argued that allocation and conservation issues could not be separated and lobbied for a twelve-mile territorial and fishing zone.[419]

The coastal group had the support of newly independent states representing the Global South. Their aim was to broadly re-shape the law of the seas regime, which had emerged during the colonial era and, they felt, functioned to the disproportionate benefit of the West. They also sought wider territorial waters and extension of other coastal state jurisdictions for the protection of their economic interests, including the fisheries.[420] UNCLOS I presented a unique opportunity for these countries, as it was the first international law conference in history in which a majority of the participants (54) were from the southern hemisphere.[421] The Soviet bloc countries, whose security interests lay in limiting the maritime powers and therefore extending territorial waters, also called for a twelve-mile territorial sea. They utilized anti-colonial rhetoric and warned of the sinister motives of the maritime powers to ingratiate themselves with the South.[422]

The traditional maritime powers consisted of the US, UK, France, Holland, and Germany. Their primary concern was to obtain an agreement that maintained the three-mile territorial sea.[423] They tried to make a broad appeal by arguing that an extension of territorial seas would limit all states' freedom to sail on and fly over the oceans. But they

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[418] Dean 1960, 755. Because of its geographic location, Iceland is heavily dependent on trade. In 1960, 97% of its exports consisted of fisheries products.
[419] Juda 1996, 144-147.
[420] While most of the Southern bloc sought territorial expansion as a means towards securing economic benefits, security concerns played a role for countries in the Arab League, primarily Saudi Arabia and the United Arab Republic (now Egypt and Syria). These sought to limit Israel's right of passage in the region. See Dean 1958, 608-609.
[421] Anand 1982, 176-179.
[422] Dean 1958, 609.
[423] Richards 1958.

were mostly worried not about the preservation of these general freedoms, but the perceived Soviet threat that would result from wider territorial seas. A change from the status quo would, according to the chairman of the US delegation, reduce the "efficiency of the [United States'] naval and air power, and … subject it to increased risk of surprise attack."[424] The US also sought to limit fishing rights beyond the traditional three-mile limit. The country's tuna and shrimp industries, for example, were already experiencing the negative consequences of Latin American states' unilateral jurisdictional expansions.[425]

Many coastal states did concede that they would be willing to accept a narrow territorial sea if a contiguous zone for exclusive fishing rights adjacent to these waters were adopted. But this matter divided the US and UK, which at various points gave in to pressures from their distant-water fishing interests. The final text of the Convention on the Territorial Sea and the Contiguous Zone included no set limit for the territorial sea but did establish a twelve-mile contiguous zone for the enforcement of customs, fiscal, and immigration policies. A proposal to include exclusive fishing rights in the contiguous zone was not accepted.[426]

The traditional principle of freedom of the high seas, including unrestricted fishing, also came under attack during the conference. This was in part due to security interests, as the Soviet bloc and some developing states argued that some restraint on high seas activities was necessary. They objected specifically to atomic bomb tests the United States' had previously undertaken in the oceans. The Southern bloc also brought up the economic implications of unfettered freedom of the seas. As these states generally

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[424] Dean 1958, 610.
[425] Dean 1958, 609; Richards 1958.
[426] Juda 1996, 140-142.

did not possess the technology to take advantage of marine resources in the high seas, they raised the need to restrict fishing activities in those areas. Developing states, especially those in Latin America, sought the right to unilateral action for the purposes of conservation in areas beyond the territorial sea. Maritime powers as well as European states with distant-water fishing fleets opposed this idea.[427] Neither the Convention on the High Seas nor the Convention on Fishing and Conservation of the Living Resources of the High Seas presented much change from the status quo. The treaties preserved the freedoms of the high seas, including the exploitation of resources. Although the Convention on Fishing declared that all states have a duty to work towards the conservation of marine resources, it barred parties from taking any unilateral measures.[428]

Debates surrounding the rights to the resources of the continental shelf had been going on periodically since the Truman Proclamation of 1945. Many governments followed the United States' example by asserting similar claims. At the conference, security and distributive concerns also dominated discussions on this issue. The maritime powers, once again concerned with protecting their navigational and overflight mobility, sought a narrow territorial definition of the continental shelf and the right to use the waters above it freely. Coastal states were primarily concerned with securing a broad definition of living resources – including fish species that utilize but are not permanently dependent on the seabed – in the class of resources over which they would have exclusive control. Distant-water fishing states, particularly Japan, argued that coastal state control should only be extended to mineral resources.[429] While the debates again included moral

[427] Juda 1996, 144-146.
[428] de Yturriga 1997, 13-15.
[429] Around this time, Japan was the world's biggest fishing state. Its annual catch more than doubled that of the United States. See Dean 1960, 780.

discussions about justice and equity,[430] they also extended to practical matters: at the time, the US and Mexico were in conflict over American fishermen's rights to the shrimp from the waters over Mexico's continental shelf.[431] The Convention on the Continental Shelf grants coastal states sovereign rights over the area for the purpose of exploiting both mineral and living resources. The US delegation considered the treaty favorably, as it preserved the navigational freedoms maritime powers were concerned with and also included a narrower definition of "living organisms" than the most extreme coastal states had hoped for.[432]

The treaties that emerged from UNCLOS I gained meager support, with ratifications remaining relatively low.[433] Additionally, most states that gained their independence after the conference disregarded the agreements.[434] Because delegates were unable to come to any consensus on the most important issues, including the breadth of the territorial sea and the extent of fisheries jurisdiction, disputes over these issues continued to flare up. Several countries extended their territorial seas to twelve miles within months of the conference.[435] A resolution adopted by UNCLOS I requested that the General Assembly call for a second conference, if necessary, to further consider questions left unsettled by it; the General Assembly acted upon this request by a nearly unanimous vote.

UNCLOS II, held in 1960, was narrower in scope, addressing only the issues of the territorial sea and exclusive fishing rights. The US feared that calls for a twelve-mile

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[430] Juda 1996, 148-150.
[431] Dean 1958, 620.
[432] Dean 1958, 619-620.
[433] As of 2015, ratifications stand at 67 for the Continental Shelf Convention; 45 for the Contiguous Zone Convention; 55 for the High Seas Convention; and 32 for the Fisheries Convention. See United Nations Treaty Collection.
[434] Morell 1992, 9.
[435] Anand 1982, 185.

territorial sea would only grow in the coming years as newly independent states gained UN membership.[436] The US delegation thus made concessions in a joint proposal with Canada to codify a six-mile territorial sea with an additional six-mile contiguous fishing zone, even though this would come "at considerable expense to US fishing interests."[437] The proposal failed by a single vote.[438] One can imagine how differently the law of the sea would look today had the US-Canadian proposal attracted just one more supporter.

After delegates again failed to reach an agreement on the major issues, Canada, with the support of the United Kingdom, approached the US with a proposal to create a new multilateral instrument outside of the UN.[439] Canadian officials estimated that twenty to thirty countries would sign a treaty on the issues of the territorial sea and fishing rights. The US, however, rejected this proposal and tried to dissuade its allies from pursuing that option. The US government feared this approach would trigger counteraction by the USSR and developing countries proclaiming a twelve-mile territorial sea, or perhaps an even broader area, thereby resulting in competing norms. Because those acceding to the treaty were friendly states, it would do little to protect US naval mobility.[440] Additionally, the Undersecretary of State's Special Assistant for Fisheries and Wildlife warned that such a treaty would damage the interests of US fishermen, many of who fished off the coast of Latin America.[441] Although Canada remained persistent in its attempt to drum up support for its proposal, it was ultimately unsuccessful.

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[436] U.S. Department of State 1960b.
[437] Dean 1960, 775.
[438] Morell 1992, 8.
[439] U.S. Department of State 1960a.
[440] U.S. Department of State 1960a.
[441] Herrington 1961.

The regime complexity literature often invokes examples of powerful states changing the institutional landscape to their benefit through institutional creation, but the limits of this strategy are usually not examined. As this dissertation shows throughout its case study chapters, it is often difficult for the agents of change to alter the status quo because other states resist such efforts. Despite much activity and a number of conventions at UNCLOS I and II, the law of the seas remained effectively unchanged.

Regime Formation: Third United Nations Law of the Sea Conference and the Costs and Benefits of the New Status Quo

Discussions on the law of the sea faded after UNCLOS II, but by the late 1960s, a number of developments led to the reemergence of oceans issues on the global stage. Technological advances continued to expand fishing capacity. The Soviet Union, for example, invested heavily in factory ships whose crews could catch, clean, fillet, can, and freeze large quantities of fish without ever needing to enter the ports of adjacent coastal states. These vessels were sent into ever-expanding territories traditionally fished by coastal states.[442] Such innovations, combined with increasing demand resulting from population growth, led to the doubling of the worldwide fish catch from 1955 to 1967.[443] As coastal fisheries began to be severely depleted, many states, including the Latin American countries that had previously argued for enclosure, called the freedom of fishing into question. New technologies also allowed for the exploitation of offshore oil deposits and minerals at the deep seabed,[444] raising questions about how the potential revenue of these natural resources should be distributed. This was especially true of

[442] Dean 1960, 792.
[443] Morell 1992, 9.
[444] The seabed is another term for ocean floor.

newly independent countries, which were generally underdeveloped and sensitive to the exploitation of resources they saw as rightfully theirs.[445]

Another important development was the realignment of the distribution of interests. The Soviet Union, which in the past had aligned itself with developing states, had begun to emerge as a maritime power. Finding itself now concerned with restrictions on navigation,[446] the USSR approached the US and other maritime powers in 1969 to solicit their views on a new law of the sea conference that would set the length of the territorial sea at twelve miles. According to a State Department Legal Adviser, both parties agreed that to obtain the cooperation of developing countries, the new instrument would need to extend some preferential fishing rights to coastal states.[447]

This approach did not have universal support within the US government, as the Secretary of the Interior warned that the effort would have "unnecessarily adverse implications for major segments of the fishing industry."[448] Having tried in the past to protect both its security and economic interests, the US seemed to accept that the former could only be achieved at the expense of the latter. Once again, according to State Department documents, the US preferred to address the different aspects of oceans issues separately to maximize its bargaining strengths.[449] The number of developing states had grown since UNCLOS I and II, and addressing all oceans issues at once would allow them to form a grand coalition. Because developing states had some cross-cutting

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[445] Juda 1996, 170.
[446] Eighty-one states made over 230 new jurisdictional claims in the decade leading up to the Third Law of the Sea Conference. See Juda 1996, 192.
[447] Belman 1969.
[448] Hickel 1969.
[449] Stevenson 1969a.

interests, isolating each of the oceans issues would allow the US to engage with smaller negotiating blocs and maximize its chances of success.

Developing states were also eager to return to issues relating to the oceans, but for bargaining purposes, wanted to address them in a single conference broad in scope. Because these countries' institutional strength lay in their large numbers, their best strategy was to create a grand coalition across issue areas, so as to minimize the chance of defection to the position of the maritime powers. They were able to pass a General Assembly resolution on the matter despite opposition by the US, USSR, and other industrialized states.[450] In a remarkable display of agenda-setting power, the Group of 77 (G77) introduced a comprehensive list of subjects and issues to be submitted to the conference. Some land-locked states and maritime powers added to the list, concerned that their priorities were not included, but there were no more objections to its scope.[451] This bundling of all oceans issues proved to be a successful strategy for the G77, as developing countries were able to extract significant concessions from the industrialized and maritime interests, and validates their usual preference for multilateral institutions.

Distributive Conflict and Political Cleavages

The Third UN Conference on the Law of the Sea began in 1973, with 137 countries attending the first session.[452] As during prior attempts to construct a global oceans regime, distributive conflict over the terms of cooperation was significant. Yet while East-West divisions were prevalent during the first two conferences, UNCLOS III

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[450] Stevenson 1969b.
[451] Anand 1983, 198.
[452] This is a significant increase from the number of attendees at UNCLOS I and II, which were 86 and 88, respectively.

took on a clear North-South dimension. The allocation of the ocean's resources was the key source of conflict.

The conference took place in the broader context of developing countries' demands for a New International Economic Order. For them, the distributive implications of the freedom of the seas were the most important issue, and the negotiations presented an opportunity to redress some of their historical grievances.[453] Developing countries' lack of access to capital and technology limited their ability to take advantage of the freedom of the seas regarding living resources; at the time, twenty industrialized states were responsible for roughly eighty percent of total world catch.[454] The potentially lucrative endeavor of deep seabed mining also preoccupied most delegations. The idea that the seabed contained limitless supplies of cobalt, nickel, and other metals was still in its infancy, and no operations had yet produced any returns. Still, because only a few industrialized states were believed to possess the capability to conduct such mining, developing countries feared that access to the resources would exaggerate the economic imbalances between North and South and could lead to a land grab of the ocean areas that were richest in resources.[455] The freedom of the seas would therefore need to be challenged to address the imbalances of the present and prevent an escalation of inequality in the future.

The concept of the exclusive economic zone (EEZ) – an area extending 200 miles from a country's coast in which it enjoys the rights to natural resources and other

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[453] Juda 1996, 210. In their assessment of the preparations for the conference, Stevenson and Oxman (1974, 13) note, "the problem of coastal state resource jurisdiction beyond the territorial sea involves more interests of more states than any other problem in the law of the sea negotiations. It is therefore not surprising that more proposals of more different countries deal with this problem, or certain aspects of it, than any other."
[454] Churchill and Lowe 1983, 197.
[455] Morell 1992, 19.

jurisdictional rights, and in which other states enjoy the freedom of navigation – emerged as the Group of 77's preferred way of addressing the fisheries problem. It was first put forward by Kenya to the Asian-African Legal Consultative Committee in 1971 and at the UN the following year. Around the same time, Latin American countries began to develop a relatively similar concept, and the two approaches merged by the beginning of UNCLOS III.[456]

To deal with the distributive implications of seabed mining in the high seas, the G77 embraced the idea that the seabed is the "common heritage of mankind," meaning it is not subject to national appropriation. They argued that any financial benefits obtained from its exploitation should be used to promote economic growth in developing countries.[457] To accomplish this goal, the G77 sought the establishment of an international seabed authority with wide regulatory powers, as well as the ability to engage in seabed mining and distribute the revenues.[458] Industrialized countries argued that rather than being the common heritage of mankind, minerals in the high seas belonged to no one, and were therefore open to exploitation by anyone with the capacity to do so.[459]

Besides the broad North-South political cleavage, there was also the coastal state versus distant-water fishing nations (DWFNs) divide. Whereas most coastal states supported the EEZ concept,[460] DWFNs like the United States, Japan, and the USSR did not. During the preparatory phases of the conference, these states argued for the

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456 Churchill and Lowe 1983, 125.
457 Morell 1992, 18.
458 Churchill and Lowe 1983, 159.
459 Morell 1992, 43.
460 Over a brief period the concept acquired nearly unanimous support of developing countries. See Friedheim 1991, 227. Additionally, some industrialized countries with significant fishing industries, including Canada and the Scandinavian states, joined the G77 in their support for the creation of the EEZ. See Churchill and Lowe 1983, 126.

preservation of the "species approach" to fisheries management;[461] that is, they favored voluntary cooperation through international or regional organizations tasked with conserving particular species and rejected the creation of "arbitrary jurisdictional boundaries."[462] Yet the DWFNs had a number of forces working against them, including their own crosscutting interests. While their distant-water fishermen saw the potential extension of coastal state fishing rights as a threat to their livelihood, those relying on catch from nearshore fisheries lobbied for greater enclosure.[463]

Faced with overwhelming opposition and their own conflicting interests, the US and USSR announced they would accept a 200-mile EEZ even before the first session of the conference took place. As the world's leading maritime powers, they were also fighting to preserve their navigational and overflight freedoms that were threatened by the enclosure movement. The USSR and United States were alarmed by the growing support among many countries for the expansion of the territorial sea; a number of Latin American and African states were even calling for a territorial expansion of 200-miles.[464] Thus, in exchange for their acceptance of the EEZ, the US and USSR demanded the codification of a twelve-mile territorial sea and the right of transit through straits used for international navigation.[465] Not a single country opposed the extensions throughout the conference proceedings.[466]

The vast majority of developing countries voted in favor of the final treaty adopted by the conference in 1982. Yet the treaty's final provisions on deep seabed

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[461] Friedheim 1991, 218.
[462] McKernan 1972.
[463] David and Digeser 1990, 9.
[464] Juda 1996, 215; Morell 1992, 43.
[465] Friedheim 1991.
[466] Anand 1983, 211.

mining led the USSR and many industrialized countries to abstain. The United States was the only industrialized country to vote against the treaty. As the years passed, industrialized countries' opposition to the deep seabed mining provisions kept them from ratifying the convention.[467] Although developing states provided the sixty ratifications required to bring the treaty into force, they recognized the need for the participation of the developed world to make the LOSC fully operative.[468] UN Secretary General Javier Perez de Cuellar initiated a consultation process to achieve this goal. In 1994, the General Assembly voted 120 to zero in favor of an agreement that would modify parts of the Convention dealing with seabed mining. Industrialized countries were able to obtain most of the concessions they sought at the Conference. These changes reversed the LOSC's provisions placing limitations on seabed mining and mandating technology transfers, and gave industrialized states greater voting power in the International Seabed Authority the convention established. Subsequent to the agreement's adoption, all developed states except for the United States ratified the Convention.[469] The treaty entered into force in 1994, twelve years after the conclusion of the Conference.

Relatively low levels of complexity marked the first two decades of the new fisheries regime, which began in the 1970s after the majority of states implemented the EEZ. It was broadly accepted that UNCLOS provided the legal framework governing all oceans activities and that the UN General Assembly served as the forum for oceans law and fisheries decision-making.[470] Other bodies, including the Food and Agriculture

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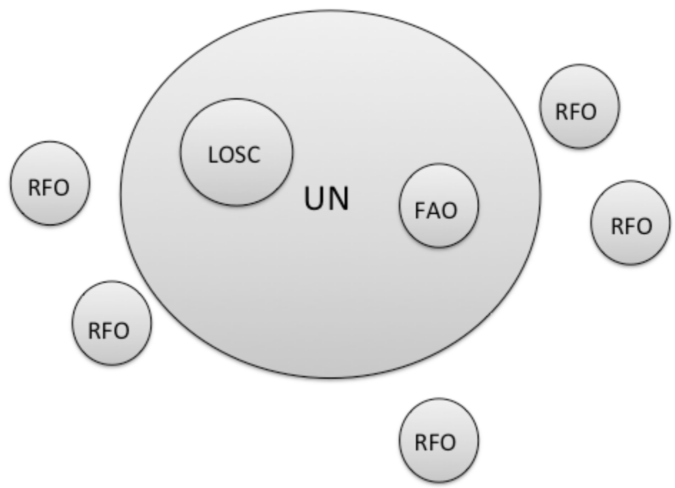
[467] The only industrialized countries to sign the Convention by 1992 were Belgium, Canada, Denmark, France, Italy, Japan, the Netherlands, Norway, and the USSR. None ratified it. See United Nations 1992.
[468] Juda 1996, 257.
[469] Although the Clinton administration was in favor of ratification, ideological opposition in Congress kept the US from becoming party to the treaty. See Juda 1996, 258.
[470] La Fayette 2006.

Organization (FAO) and regional fisheries organizations (RFOs), dealt in fisheries-related matters, but their work was primarily technical in nature. Because the General Assembly served as the core decision-making body for fisheries law, institutional integration was high. Because the FAO and RFOs did not follow or establish legal principles incompatible with the LOSC, norm conflict was low. Finally, although many

Figure 4.2: Global Fisheries Regime, 1970s-1980s



industrialized countries did not initially ratify the Convention, the number of state parties grew over time. Even those not party to the LOSC accepted its fisheries provisions and the General Assembly's role, rendering actor constellations coherent. Yet regimes are seldom static, and as issues of fisheries management continued to go unresolved, the regime became moderately more complex over time.

Institutional Benefits

The acceptance of the EEZ has profoundly affected the development of the fisheries regime. The EEZ brought around 90% of the world's commercially exploited fish stocks, previously governed by the freedom of the seas, under the sovereign ownership of coastal states.[471] This galvanized the fishing industries of these countries, which pressured their governments to implement the LOSC's policies. The US Congress, for example, responded to pressure of its coastal fishing interests by passing the 1976 Fishery Conservation and Management Act to be consistent with the LOSC's fisheries provisions. The law extended the limit of US fisheries control from twelve to 200 miles and established eight regional fisheries councils to exercise authority over this area. Subsequent amendments to the law have preserved its consistency with the LOSC's fisheries provisions.[472] As other states implemented the EEZ and their domestic fishing industries expanded into the areas once populated by foreign fleets, the number of actors with stakes in the current system grew, and few countries had any interest in challenging this aspect of the LOSC fisheries provisions. Across the world's 150 or so coastal states, satisfaction with the EEZ provisions of the LOSC was near universal. Even where distant water fishing interests were present, the benefits of the EEZs to coastal fishermen far outweighed any losses suffered by distant water fishermen. The institutional benefits provided by the EEZ are so broad as to make a successful challenge of the focal institution quite unlikely.

Still, contrary to the expectations of many parties at the conference, the power of ownership – that is, the enclosure of many of the world's fisheries in the newly expanded EEZs – did not result in significant gains in fisheries conservation. As foreign fishermen became excluded from the EEZs, domestic fishing efforts expanded and filled in the gaps. Distant-water fishing nations, in turn, shifted their focus to catch in the high seas,

[471] Frankx 2006, 2010.
[472] Hanna et al. 2000, 26; U.S. Congress 2008.

including stock that straddles and migrates between the EEZ and the high seas.[473] Three major challenges thus became apparent by the early 1990s and served as a source of status quo dissatisfaction. First, overcapitalization of domestic fishing industries and the growing focus on high seas catch led to decline in stock, including the collapse of some major fisheries. This is a direct effect of the implementation of the LOSC's fishing provisions. Second, concerns over marine biodiversity began rising as scientists observed declines in large ocean predators resulting from bycatch. This called into question not only those species' viability but ecosystem resilience as well. Third, illegal, unregulated, and unreported (IUU) fishing[474] activities expanded. These developments have been exacerbated by technological innovations that have increased fishing vessel efficiency and capacity.[475]

Coalition of the Dissatisfied

Focal institutions shape the forces that determine institutional change. First, the ways in which the focal institution addresses distributive conflict among member states determines the coalition of the dissatisfied. To identify the dissatisfied as well as those favoring the status quo, we must compare the preferences identified by major negotiating blocs during the focal institution's negotiations to the provisions achieved in the final

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[473] Highly migratory species, both fish and mammals, often involve the interests of several, sometimes widely distant, coastal states. Anadromous fish, which are born in fresh water, migrate to the ocean, and return to their rivers to reproduce, are a kind of migratory species. Straddling stocks usually straddle the boundaries of only one or two states and the high waters and are thus more easily manageable. See Burke 1993.
[474] Illegal fishing occurs when vessels violate the laws of a fishery. Unreported fishing is fishing that is undocumented or misreported to the relevant authority. Unregulated fishing is done by vessels without nationality, or those with a "flag of convenience" – the flag of a country that is not member of the regional organization managing the area. See Love, 2010. The value of these activities in the high seas is estimated to be $1.2 billion annually. See Agnew et al. 2008.
[475] Barnes 2006, 241; Gjerde 2006, 281.

document. The actors who view the outcome as farther from their expressed ideal make up the coalition of the dissatisfied.

The adoption of the EEZ did not solve all fisheries-related conflicts. The question of how to manage highly migratory species and straddling stocks remained. During the conference, Canada and Argentina lobbied for the recognition of special rights of coastal states over straddling and migratory species, while states with distant-water fishing interests, including Japan, the USSR, and Spain, argued for the preservation of the freedom of the seas doctrine in the high seas.[476] The Convention's vague stipulations on the matter allowed DWFNs to assert their unrestricted freedom to fish in the high seas.[477] Having been pushed out of other states' EEZ areas, the DWFNs did not want any other institutional changes that would further limit the areas in which they could fish. Therefore, DWFNs became the status quo actors. Yet it is important to note that the number of important DWF actors was at the time relatively low. In the 1995, Japan, Poland, South Korea, the USSR/Russian Federation, Taiwan, and Spain accounted for 90% of all high seas catch.[478] The European Union, acting on behalf of the interests of Spain, sided with the DWF actors.

Unable to secure their special rights to outside of their EEZs, coastal states without significant distant-water fishing interests viewed themselves as being at the losing end of the distributive conflict over straddling and migratory stocks. Their discontent peaked in the early 1990s, as the catch of straddling and highly migratory

[476] Australia, Cape Verde, Colombia, Costa Rica, Guatemala, Iceland, New Zealand, Philippines, Portugal, Sao Tome and Principe, Senegal, Sierra Leone, and Uruguay all supported Canada and Argentina's position. See Davies and Redgwell 1996, 238.
[477] Juda 1997, 149.
[478] Juda 1997, 162.

species more than doubled over the two decades prior.[479] The operation of distant water fishing vessels just outside coastal states' EEZs stymied their national conservation efforts while also cutting into the economic benefits of their fishing industries.[480]

Problems relating to straddling and migratory stocks were particularly acute in Canada, which has the world's longest coastline.[481] By the early 1990s, the Canadian fishing industry was in crisis. Pressure by DWNFs on the country's living marine resources began as early as the 1950s and increased over the next two decades, becoming a key factor in its government's decision to implement the 200-mile exclusive fishing zone in 1977. Yet this policy did not lead to greater conservation. Rather, overcapacity in Canada's fishing industry combined with exploitation by distant-water vessels just outside of the country's EEZ led to the collapse of a number of economically important stocks, creating disastrous effects for the country's fishing economy.[482]

The fishing of straddling and migratory stock by DWFNs also proved particularly controversial in Latin America, a region that has historically viewed foreign exploitation of its resources with suspicion. Latin America is one of the most important sources of world fish production, with Peru and Chile dominating the region's fishing industry in the early 1990s. Between them, the two countries accounted for nearly 80% of the total quantity of catch in Latin America and the Caribbean.[483] And as in Canada, these countries' fisheries were in crisis within two decades of their implementation of the EEZ. The main species targeted by Peruvian and Chilean fishermen were overexploited, due to

[479] FAO Fisheries Department 1994.
[480] Juda 2002,115.
[481] Central Intelligence Agency 2014.
[482] Hinds 1995; Schrank 1995.
[483] Christy 1997, 17.

overfishing and over-capitalization.[484] They placed the blame on DWFNs. To protect their industries, Chile, Peru, Colombia, Mexico, and Argentina all claimed special interests and rights in areas beyond their EEZs by the mid-1990s.[485]

So, what is the size of the coalition of the dissatisfied? The most generous count of the members of this coalition totals as many as eighty states. This total is based on the number of countries interacting with regional fisheries organizations through cooperation or non-cooperation and excludes states with significant DWF interests.[486] A more modest account limits the coalition to include only states with at least moderately long coastlines, since longer coastlines implicate greater stocks. It also excludes many least developed countries. Although some LDCs have noted their displeasure with the status of the international fisheries regime – Sierra Leone, for example, complained of capacity constraints that restricted the ability of countries in its region to monitor and control their EEZs in the face of "rapacious" DWFNs[487] – most have not been active agitators for change. A possible reason for this is that LDCs tend to lack the technology necessary for offshore fishing and do not generally engage in high seas activities. Many LDCs have entered into bilateral access agreements with DWFNs. These agreements, which are discussed in a later section, allow DWFNs to fish within LDCs' EEZs for compensation. Because it consists of significantly fewer states than three-fourths of the members of the focal institution, this coalition of the dissatisfied is coded as small.

Institutional Inertia

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[484] Iberra, Reid, and Thorpe 2000, 508.
[485] Meltzer 1994, 264.
[486] Based on numbers provided by Hedley et al. 2007, 56.
[487] United Nations 1993.

The LOSC differs from many environmental treaties in that it is not a "framework" treaty; that is, it does not have provisions for the adoption of protocols or annexes.[488] State parties can *change* the convention and create a nested layer through the introduction of formal amendments. An amendment can enter into force without a conference if there is unanimous consent among state parties.[489] Otherwise, to establish the conference proceedings necessary for an amendment, at least half of all parties must reply favorably to an amendment proposal.[490] An amendment enters into force only for those who have ratified it when at least two-thirds of state parties accede to it.[491] This is the same barrier to institutional change that exists for Amendments of the Montreal Protocol, discussed in chapter 3.

Table 4.2: LOSC ratifications, 1982-2016

Year	**Nr. of Parties**	**2/3 parties**
1995	82	55
2000	134	90
2005	149	100
2010	161	108
2016	167	112

Beyond amendments, the LOSC also allows for further evolution through the adoption of additional global and regional agreements and soft law. This includes implementing agreements that interpret and develop existing LOSC provisions, in ways similar to protocols to framework conventions. Yet unlike protocols, implementing agreements are freestanding treaties in which even parties outside of the LOSC can participate.[492] As such, they constitute overlapping layering.

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488 Boyle 2005, 42.
489 United Nations Convention on the Law of the Sea, Article 313.
490 United Nations Convention on the Law of the Sea, Article 314.
491 United Nations Convention on the Law of the Sea, Article 316. Where an amendment concerns activity in the seabed beyond the areas of national jurisdiction, a three-fourths rate of ratification is necessary for entry into force.
492 Boyle 2005, 43.

This dissertation project codes institutional inertia as low where two-thirds or fewer parties are necessary to change an institution. Compared to institutions that require a three-fourths or unanimous vote, inertia is indeed low in the LOSC. Nonetheless, the convention's formal amendment procedures create a large number of veto actors. *Table 4.2* indicates that ninety ratifications would have been necessary for an amendment to enter into force within the first five years of the LOSC's entry into force. This, according to legal scholars, is likely "an insurmountable hurdle for most amendments."[493] They suspect that a proposal would need to be "uncontroversial and beneficial to all the major law of the sea interest groups" in order to enter into force.[494] Thus, despite comparatively low inertia, institutional change within the LOSC is difficult to achieve.

Intensity of Distributive Conflict

The material interests that are implicated by the issue at hand are important for determining the intensity of status quo dissatisfaction. The greater the material costs the status quo imposes on the coalition of the dissatisfied, the higher their incentive to pursue strategies that displace the focal institution.

Commercial fishing is the base through which the world's fisheries make a contribution to national and global economies. Value is added through processing, marketing, retailing, and the food service industry. Additionally, subsistence fisheries are an important source of food security in many coastal countries.[495] Overall, the fisheries are relatively more important to the economic wellbeing of developing countries. In 2010, 97% of the 120 million people depending on commercial fisheries for their

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[493] Freestone and Elfernik 2005, 179.
[494] Ibid. 180.
[495] World Bank, Food and Agriculture Organization, World Fish Center 2010, 1.

employment lived in developing countries.[496] Beyond these generalities, there is naturally quite some variation in the importance of their fishing industries to the coalition of the dissatisfied.

Table 4.3 identifies a number of measures through which one can evaluate the intensity of distributive conflict from the perspectives of the most vocal coastal and DWF actors. Of the countries listed, Iceland clearly had the most at stake in regards to its fishing industry, as the fisheries provided over sixty percent of the country's export earnings and employed around two percent of its population. Although it has a relatively

Table 4.3: Fisheries as source of economic value and food consumption, 1990

Country	**Length of coastline (miles)**	**Fisheries as percentage total exports**	**Employment in fisheries (thousands)**	**Fish for consumption (per capita, kg)**
Canada	150686	1.3%	89.9	23.6
Argentina	2930	0.4%	7.8	6
Chile	2689	4.3%	81.9	18.3
Peru	1910	2.6%	43.7	21.4
Japan	18446	0.2%	370.6	61.2
Spain	4885	0.9%	87.3	35.2
Iceland	3081	66%	6.9	N/A
Sierra Leone	347	9%	16.5	N/A

Sources: FAO Fisheries Commodities Global Production and Trade; World Bank World Integrated Trade Solution; FAO Fisheries Circular; FAO Fisheries and Aquaculture Department Country Profiles

short coast, Sierra Leone was also reliant on fish as a source of exports. Yet beyond these two countries, the material implications of the fisheries to actors vocal during LOSC

[496] World Bank, Food and Agriculture Organization, World Fish Center 2010, 1.

negotiations and beyond were much smaller. In Chile and Peru as well, the fisheries contributed some export earnings and provided employment in coastal regions.[497] The figures are similar in Canada. In the 1990s, the Canadian fishing industry constituted very small share of the country's economy; still, it was an important sector in the coastal provinces.[498] In Newfoundland, for example, a large proportion of the workforce depended on the cod fishery.[499] Provincial governments on both coasts held the maintenance of employment in the fishing industry as a primary policy objective.[500] The Canadian government claimed that 30,000 job losses occurred as a result of the exploitation of DWFNs.[501]

The intensity of distributive conflict appears much smaller still when we consider that the figures discussed above deal with countries' gross fishing industries, whereas the conflict between DWFNs and coastal states revolves only around the dimensions of straddling and highly migratory stock. Unfortunately, a dearth of data makes it difficult to assess the economic impacts of these stocks on coastal countries;[502] however, there are reasons to believe it was not particularly significant. Of course, there is the fact that EEZs encompass over ninety percent of the world's commercially exploitable fish, so straddling and migratory stock account for less than ten percent of all fishes. Most of those employed in commercial fisheries capture are involved in the small-scale fisheries sector, which does not include distant water fishing operations.[503]

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[497] Iberra, Reid, and Thorpe 2000, 508.
[498] Hinds 1995, 283.
[499] "Meeting of Like Minded Countries" 1993.
[500] Schrank 1995 293.
[501] United Nations 1993.
[502] FAO Fisheries Department 1994.
[503] In 2010, 92% of those employed in the fisheries did not partake in distant water fishing operations. Although this number has surely changed since the period of interest – DWF has declined over time – it is

Additionally, although the catch of these stocks more than doubled between 1970 and 1991, as reported, this is not entirely attributable to DWFNs. Over roughly the same time period in Latin America, for example, the catch of highly migratory species by foreign fleets actually declined from 75% to 45%. At the same time, the number of Latin American fleets fishing outside the continent's EEZs increased.[504] For the perspective of a distant-water fishing nation, we can look to Japan. The country, identified along with the USSR as the "all-time most dominant DWFN," accounted for 21% of the total catch of all DWFNs. Yet between 1970 and 1990, the amount of distant water catch as a proportion of total catch made by the Japanese fishermen declined, from 20% to 13%.[505] Contrary to the impression put forward by coastal states, the establishment of EEZ actually caused the withdrawal of Japanese operators from many distant water fisheries.[506]

The intensity of distributive conflict associated with the world's fisheries in the early 1990s was relatively low. The enclosure of the vast majority of the global stocks through the EEZ left only a small portion of the fisheries as a source of inter-state conflict, and the extent to which the status quo disadvantaged coastal states relative to DWFNs is debatable. Therefore, there was not much incentive for the dissatisfied to seek to displace the focal institution.

Expectations

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still indicative of how relatively small DWFN operations are as a proportion of all fisheries economies. See World Bank, Food and Agriculture Organization, World Fish Center 2010, 1.
[504] Christy 1997, 12.
[505] Ministry of Internal Affairs and Communications 2016.
[506] Popescu and Ogushi 2013, 30.

The introduction of a focal institution into the law of the sea regime led to the creation of a relatively small coalition of the dissatisfied, low institutional inertia, and low intensity of distributive conflict. Because the intensity of distributive conflict is low, the agents of change should prefer to change the status quo through layering rather than dismantle it through displacement. We can expect the dissatisfied to prefer institutional change through an amendment. But because the coalition of the dissatisfied is small, this may not be possible. Therefore, the agents of change are likely to pursue institutional *selection*, which may result in conversion. They are also likely to pursue agreements outside of the LOSC, which will lead to overlapping layering. Since the coalition is composed of primarily developing states, they are likely to prefer large multilateral institutions for venues. Overall, the expected processes of change of overlapping layering and conversion make relatively modest contributions towards greater complexity through increasing norm conflict, lowering institutional integration, and changing actor constellations.

Overlapping Layering

United Nations Agreements

Conflict over the management of highly migratory species and straddling stocks, never resolved by the LOSC, escalated by the early 1990s and proved to be the biggest catalyst for institutional change. It is important to point out that the EEZ concept, an example of broad institutional benefits discussed in chapter 2, has never been challenged. Rather, the attempts to formally change the institutional landscape were contained to the issue of stocks that cross into the high seas. In their pursuit of change, the dissatisfied turned repeatedly to the UN's General Assembly and subsidiary bodies, creating both soft and hard law instruments that were layered atop the LOSC in an overlapping fashion. By increasing norm conflict, lowering institutional integration, and fragmenting actor constellations, this layering resulted in greater fragmentation to the fisheries regime.

Canada, along with a number of Latin American states, became the leading agitator for reform of the international fisheries regime, seeking an expansion of coastal states' rights in regards to the management of straddling and migratory stocks.[507] As previously discussed, the combination of overcapacity and DWFNs' exploitation outside of the country's EEZ plunged the Canadian fishing industry into crisis by the early 1990s. The repercussions of the industry's decline reverberated in the international arena when, in an attempt to limit fishing by European Community (EC) fleets in the areas adjacent to its EEZ, Canada seized a Spanish vessel and arrested its crew, causing a minor political crisis.[508] Additionally, the Canadian government passed a 1994 law that claimed the direct exercise of jurisdiction over the high seas fisheries of its straddling stocks, as well as the enforcement of the law through the use of force. The law was not created in a vacuum; rather, it was part of a broader Canadian strategy to tilt the outcome of a concurrent UN conference on straddling and highly migratory fish stocks in the favor of coastal states' preferences.[509] Colombia, Peru, Mexico, Argentina, and Chile similarly all claimed special interests and rights in areas beyond their EEZs for the protection of migratory stocks in the early 1990s.[510]

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[507] de Fontaubert 1995, 80; "Meeting of Like Minded Countries" 1993.
[508] See Davies and Redgwell 1996 for a detailed account of the Canada-EC dispute. The actions of Spanish fishing vessels in the Namibian EEZ similarly led the latter to arrest Spanish fishermen and created friction between Namibia and the EC. See Barkin and DeSombre 2000.
[509] Vicuna 1995, 528.
[510] Meltzer 1994, 264.

In addition to implementing domestic policies that challenged the status quo, some coastal states also coordinated their calls for international action. In 1990, Canada hosted the International Conference on Conservation and Management of the Living Resources of the High Seas, marking the first step in the process that would lead to the gradual restriction of fishing in the high seas.[511] At another meeting the following year, Canada, Chile, and New Zealand developed the "Santiago Document,"[512] which calls for the creation of new principles and measures, consistent with LOSC, that ensure conservation of marine living resources in the high seas. The change agents' expressed objective for any new instruments to be consistent with the LOSC signals that if they are successful, overlapping layering will be the resulting process of change. The document outlines coastal states' "special interests and responsibility" for the management highly migratory stocks even when said species are outside of the EEZ.[513] They used this document as a basis for their calls for clarification of the high seas provisions of the LOSC at a UN consultative process on the high seas fisheries. There, DWFNs expressed their preference for the status quo.[514]

All of these meetings were setting the stage for the UN Conference on Environment and Development (UNCED) in 1992. Because of the prominence of conflicts stemming from the management of straddling and highly migratory stocks, as well as disputes over the effects of certain fishing practices on bycatch, high seas fisheries management and conservation became a central issue at the conference.

[511] The Canadian government invited fifteen like-minded countries: Argentina, Australia, Cape Verde, Chile, Cook Islands, Iceland, Mauritius, Morocco, New Zealand, Peru, Russia, Senegal, Uruguay, and the United States. See de Yturriga 1997, 178.
[512] "Meeting of Like-Minded Countries" 1993.
[513] "Conservation and Management of Living Resources of the High Seas – Principles and Measures for an Effective Regime Based on the UN Convention on the Law of the Sea."
[514] "Report to Member Countries" 1991.

Distributive conflict was once again apparent between two main negotiating groups: coastal states primarily concerned with straddling and migratory stocks and distant-water fishing nations.[515] Canada was the leading voice of the coastal states. This group's primary goal was to have the key provisions of the Santiago Document included in the action program resulting from the conference: the development of new rules and the granting of special rights to coastal states in the management of migratory stocks. The European Community (EC) and Japan led the DWFNs, which sought to preserve the freedom to fish in the high seas in areas adjacent to other countries' EEZs. Their debates on the high seas were among the most contentious of the conference. The US government acted as a mediator between the parties and all were eventually able to agree to a compromise.[516]

The UNCED resulted in Agenda 21, a non-binding comprehensive action plan later endorsed by the General Assembly. Its chapter on the oceans and marine living resources is the longest and among the most complex. It calls on states to minimize incidental bycatch, boost compliance efforts for rules regarding conservation and management in the high seas, prohibit destructive fishing practices, and deter reflagging of vessels.[517] The Santiago Document was not included in Agenda 21; however, coastal countries were able to leverage it to their benefit. A version of the document submitted during a preparatory committee session attracted a total of forty, primarily developing country co-sponsors.[518] This number is an indication of the size of the coalition of the dissatisfied. In terms relative to the number of state parties to the LOSC during the 1990s,

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[515] Burke 1993.
[516] International Institute 1992a; 1992b.
[517] "Agenda 21."
[518] "Meeting of Like-Minded Countries" 1993.

forty amounted to a small coalition. In exchange for agreeing to exclude the "special rights" language from Agenda 21, coastal states obtained a significant concession: an agreement to convene a special conference to address the issues surrounding straddling and highly migratory stocks.[519] Before accepting the deal, the EC insisted on language that explicitly stated the new agreement would be consistent with the provisions of the LOSC.[520] Agenda 21 declares this will be the case, including "the rights and obligations of coastal States and States fishing in the high seas."[521] This again demonstrates a commitment to overlapping layering.

It was clear at the UNCED that there was broad agreement among the members of the international community that the global fisheries were in crisis; however, there was little consensus over how to regulate the high seas.[522] The conference was the catalyst for three subsequent agreements: the 1993 FAO Compliance Agreement,[523] 1995 FAO Code of Conduct on Responsible Fisheries, and 1995 UN Fish Stocks Agreement (FSA). As all of these instruments emerged from the same process and their negotiations overlapped to various extents, it is best to evaluate them in the context of one another. All three instruments reference the LOSC, declaring their intent to be consistent with its fisheries provisions.[524] This is further indication of overlapping layering. Still, while the Code and Compliance Agreement are generally accepted as being complementary to the LOSC, a

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[519] Meltzer 1994, 323.
[520] International Institute 1992a.
[521] "Agenda 21" 179.
[522] United Nations 1994.
[523] "Food and Agriculture Organization Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas."
[524] Hey 1996.

number of legal scholars and governments have interpreted parts of the FSA as being incompatible the convention.[525]

The Compliance Agreement and Code of Conduct both have their origins in discussions that began in the FAO's Committee on Fisheries (COFI) at the request of the General Assembly. The FAO's involvement in the fisheries began soon after its creation in 1945. Initially, its area of focus was the creation of regional fisheries councils in developing regions, for which it provided secretariat services and operation funds. The FAO was able to expand the scope of its assistance to the councils and their developing country members with the increase of United Nations development funding that began in the 1960s. In particular, it was able to secure UN Development Program (UNDP) support for regional fisheries development programs, which included training regional fisheries experts. The FAO's early activities served to place food and economic development on the international fisheries agenda.[526] It became more relevant on the global scale in 1965 with the creation of COFI, a subsidiary body that any of the FAO's member-states can join.[527] COFI is a forum and technical body that provides information on the state of the global fisheries to its members, international organizations, and non-governmental organizations.

The Compliance Agreement is a legally binding instrument that is relatively technical in nature. It applies to fishing vessels, narrowly defined, and is meant to strengthen flag-state responsibility by enhancing states' monitoring of vessels and deterring the practice of re-flagging.[528] The Code of Conduct is non-binding and broader

[525] See Hedley et al. 2007; Hey 1996; Molenaar 2011, 206; de Yturriga 1997.
[526] Heck 1976 740.
[527]As of 2016, COFI has 136 members.
[528] Birnie 1999.

in scope, seeking to ensure the sustainable exploitation of living marine resources. It emphasizes an ecosystem approach, the maintenance of biodiversity, and the use of the precautionary principle.[529] What brought about these agreements at the FAO? Many of the provisions outlined in the instruments are reflected in the Fish Stocks Agreement, suggesting that perhaps coastal states used the process of constructing the Code and Compliance Agreement to influence the outcome of the FSA negotiations.[530] Given their numerical advantage in COFI and the FAO's historical embrace of developing countries' agendas, it is not surprising that coastal states would embrace this tactic. As for the defenders of the status quo, the Compliance Agreement and Code presented opportunities to deflect broader fisheries discussions. On their own, these agreements did not represent much divergence from the status quo. The status quo defenders embraced the non-binding Code, which was adopted by consensus,[531] and could abstain from ratifying the Compliance Agreement. The latter did not gain enough ratifications to enter into force until 2003 and even today only has 40 state parties.[532] This represents a fragmentation of actor constellations.

The coalitions at the Fish Stocks Agreement conference split along familiar coastal state-DWFNs lines, with the latter finding themselves at a relative disadvantage. They were greatly outnumbered and had the prospect of unilateral measures by coastal states looming in the background.[533] Argentina, Canada, Chile, Iceland, and New Zealand represented the interests of coastal states. Although this group worked closely with

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[529] Davies and Redgwell 1996, 252.
[530] Juda 2002, 118 writes "discussions leading to the adoption of the Code of Conduct have no doubt contributed to the development of the FAO Compliance Agreement and the United Nations Fish Stocks Agreement." It has also influenced the work of existing and emerging regional fisheries bodies.
[531] Birdie 1999.
[532] FAO 2014.
[533] Meltzer 1994. It was during the fourth session of the conference that Canada used force against the Spanish vessel fishing in the areas adjacent to its EEZ.

environmental NGOs and often identified conservation as their priority, it was clear that issues of the allocation and control of marine resources were at the forefront of all parties' concerns.[534] These states pursued three primary objectives on which they received significant pushback from DWFNs, which preferred the status quo. First, the coastal group again lobbied for special rights and responsibilities in areas outside the EEZ for the purposes of fisheries management and conservation of straddling and highly migratory stocks, including the application of unilateral measures. Second, they called for the right of any party to board, inspect, and arrest the vessel of any other party should it be found in violation of conservation measures. Third, the coastal group demanded that the instrument resulting from the conference be legally binding.[535]

A number of the parties that were active during UNCLOS III negotiations played a relatively quieter role. Developing country involvement was limited, with many of these parties giving little input despite having migratory stock interests. An analysis of the list of documents from the conference reveals the virtual absence of Africa, Asian coastal states without distant-water fishing operations, and even a number of Latin American counties. It is not entirely clear why these countries' roles receded, although a number of factors likely played a role. For one, the G77 had been unable to act as a coordinated group during the FSA conference and other multilateral forums following the UNCED. The absence of benefits from the G77 network, combined with the standing costs of maintaining a delegation for a period of two years,[536] likely created high transaction costs of participation for many developing countries. Additionally, as will be

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[534] Hoel 1998, 246; Juda 1997, 151. The European Union's Fisheries Commissioner complained that coastal states were hiding their economic interests behind an ecological façade. See Juda 1996, 285.
[535] Barston 1995, 161; Hayashi 1994; Juda 1997.
[536] Barston 1995, 162; Sydnes 2002, 377.

discussed in the next section, many developing countries had by this point entered into bilateral agreements with parties wishing to fish in their EEZs and perhaps did not see the conference as relevant. India was the most vocal presence from the developing world. The country's delegation demanded greater assistance with scientific research and data collection.[537]

The United States and Russia, also important actors at the UNCLOS conferences, did not play a major role during FSA negotiations. Because these states have both coastal and distant-water fishing interests, they did not stake out strong positions.[538] In a testimony before Congress as the FSA was being negotiated, the Deputy Assistant Secretary for Oceans Affairs highlighted some of the country's concerns. He spoke of the need to protect both the interests of New England fishermen, who sought to maintain their access to straddling stocks around Newfoundland, as well as Alaska's access to coastal Pollock. The US delegation's preference was for an instrument consistent with the LOSC that would be implemented through regional bodies.[539] The push for a regional regime is reminiscent of the strategy the US pursued during the first Law of the Sea Conference. The US did seem committed to achieving a compromise, once again taking on the role of mediator between coastal states and DWFNs.[540]

Coastal states, through their collective influence, were able to gain major concessions from the DWFNs. The Fish Stocks Agreement is a legally binding instrument that broadens the obligations of the fisheries regime by requiring parties to

[537] Barston 1995, 164.
[538] Barston 1995, 160. Even the European Community's usually strong DWFN position was diluted when Sweden, an ardent supporter of coastal states' rights, became a member in 1994. See de Fontaubert 1995, 85.
[539] Colson 1993.
[540] de Yturriga 1997, 195.

apply the precautionary principle and ecosystems approach to the management of marine living resources, to protect marine biodiversity, and to eliminate over-fishing and excess capacity.[541] Some of the provisions of the FSA present an elaboration of the LOSC framework. These include the mandate for parties to cooperate either directly or through regional fisheries organizations (RFOs). Where such arrangements or organizations do not already exist, parties must establish them. The FSA leaves it to these regional arrangements to monitor, control, provide surveillance, and enforce fisheries conservation and management.[542]

The call to use regional agreements for the implementation of the FSA appeared early during conference negotiations and was widely accepted as appropriate, never falling prey to the ever-present coastal state-DWFN lines of division. There was no disagreement about whether such arrangements were the best vehicle for implementation, and very little debate, relative to other issues, about the functions they should perform.[543] Throughout the negotiation process, delegates often invoked successful regional agreements to make the case that cooperation on straddling and migratory stocks can best be achieved though such institutions.[544] This indicates that functionalist logic helps explain the turn towards regionalism, since delegates made a clear attempt to design the FSA in ways that would maximize the efficiency of interstate cooperation.

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[541] The United Nations Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks.
[542] Specifically, in fulfilling their obligation to cooperate through RFOs or arrangements, parties shall, among other duties: (a) agree to comply with conservation and management measures for sustainability; (b) agree on participation and allocation rights; (c) adopt minimum standards for responsible conduct of fishing operations; (d) establish mechanisms for monitoring, control, surveillance, and enforcement; (e) promote peaceful dispute settlement; (f) ensure cooperation of relevant national agencies (Article 10).
[543] See Barston 1995; Hayashi 1994; de Yturriga 1997 186-198.
[544] De Fontaubert 1995, 84.

There is consensus that certain provisions of the FSA are in normative conflict with the LOSC. These include the FSA's imposition of its obligations on all states, including non-parties. That means that any state whose vessels fish in an area of the high seas under the management of an RFO must comply with the organization's measures. This is not only incompatible with the LOSC but also with the general principles of international law.[545] The FSA also determines that state parties that are members of RFOs or other regional agreements may inspect the vessels of non-members on the high seas, and are allowed to use force in specific cases.[546] With these provisions, coastal states have at least partially succeeded in expanding their special interests over the management of living resources in the high seas recognized.

Many states were dissatisfied with the provisions of the agreement and reacted by not ratifying the treaty. This includes distant-water fishing nations, for obvious reasons, but also most Latin American countries. The latter objected to coastal states not receiving preferential decision-making status in RFOs. These countries, along with China, South Korea, and Indonesia, were also opposed to the provisions on boarding and inspecting, claiming these were inconsistent with the LOSC.[547] It took six years to achieve the thirty ratifications necessary for the FSA to enter into force, even though twenty-six states had signed the treaty upon the closing of the conference.[548] Currently, there are 82 parties to the FSA, including major DWF actors like the European Union, Japan, and South Korea.[549]

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[545] de Yturriga 1997, 223; Hey 1996, 488.
[546] de Yturriga 1997, 224-226.
[547] Molenaar 2011; Hedley et al. 2007.
[548] Balton and Koehler 2006.
[549] United Nations Division for Oceans and the Law of the Sea 2015.

Still, there are many states with interests in high seas fisheries who continue to remain outside of the agreement.[550] China, whose distant-water fishing capacity has been growing, is not a party.[551] There is also a lack of presence by least developed countries, many of which remain outside of the agreement due to capacity restraints.[552] Even the Latin American bloc, which includes states that most aggressively agitated for change, has not acceded to the FSA. This shows how difficult it can be for the dissatisfied to coalesce around a single avenue of institutional change, even in the presence of low distributive conflict. Although the Latin American bloc has issued a declaration in which they express their support for the FSA, they remain outside of the agreement due to some provisions they insist on being reviewed. As is the case with the Compliance Agreement, this modest number of ratification signals the fragmentation of actor constellations in the fisheries regime.

The UN instruments outlined in this section, particularly the FSA, are the fruits of a successful institutional proliferation strategy embraced by coastal states. These actors agitated for institutional change through domestic legislation and across a number of international forums. As expected, the coalition made up primarily of developing states opted for United Nations venues*,* through which they sought to change LOSC fisheries regime rather attempting to displace it. The new institutions introduced into the system were layered atop the LOSC in an overlapping fashion. Although the FSA introduced some normative conflict into the regime and actor constellations changed due to spotty ratifications of the new instruments, the contribution towards greater complexity was modest. This is because despite some conflicting norms, a full assessment of the FSA

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[550] Hedley et al. 2007 estimate that there are a total of 122 states with fishing interests relevant to the FSA.
[551] Hedley et al. 2007.
[552] Molenaar 2011, 212.

finds that many of its provisions are either fully consistent with or present a natural development of the LOSC.[553] In all, none of the instruments discussed in this section presented a fundamental challenge to the LOSC. This is consistent with the theoretical model, which expects where the intensity of distributive conflict is low, the dissatisfied will not attempt to displace the focal institution.

Bilateral Agreements and Regional Fisheries Organizations

The status of bilateral and regional fisheries agreements has changed over time and cannot be understood outside of the context of the LOSC and later Fish Stocks Agreement. The adoption of the LOSC led to the proliferation of bilateral fisheries agreements between state parties, while the FSA expanded the responsibilities of regional fisheries organizations (RFOs). The FSA has delegated to RFOs the responsibility to implement its and some of the LOSC's provisions; therefore, like the FSA, RFOs exist as an overlapping layer in the fisheries regime. As discussed in the previous section, there is a significant difference in the number of state parties to the LOSC and the FSA. Because the FSA is not accepted as binding to all members of the LOSC but delegates some decision-making authority to RFOs, it has fragmented decision-making procedures in the fisheries regime and thus created greater complexity.

Regional cooperation has played a central and evolving role in the management of the international fisheries. The levels of institutionalization in such efforts vary. At times, states deal with each other on an ad hoc basis, but cooperation is more often achieved through formal agreements. In many cases, states establish regional fisheries organizations (RFOs) that are at a minimum comprised of a decision-making body and

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[553] See de Yturriga 1997, 221-227.

secretariat. These organizations' mandates can generally be divided into three categories: cooperation on scientific research, cooperation on regional development, and fisheries management.[554]

During the high seas regime, states established a number of RFOs to cooperate on fisheries issues that extended past their territorial waters. The first of these was the International Council for the Exploration of the Sea (ICES), created in 1902 and currently still in existence. The majority of these early RFOs, whose membership consisted of developed countries, focused on cooperation for scientific purposes and the exchange of data; very few addressed conservation measures, and those that did utilized technical rather than allocation approaches.[555] In the developing world, RFOs began to emerge in the 1950s, usually at the initiative of the FAO, and were geared towards the purpose of economic development. None had any regulatory powers.[556]

In the northern hemisphere, member states' views regarding the purpose of RFOs began to change in the 1960s when, with the growth of distant water fishing and the emergence of the field of fisheries economics, some recognized the need to institute fishing quotas. However, disagreements about the allocation of resources rendered management attempts at the majority of these RFOs ineffective, as members were preoccupied with equity considerations and the treatment of new entrants to the fisheries. Unreliable scientific information and difficulties with monitoring and surveillance presented problems as well.[557] In many cases, member states failed to agree to any conservation measures or opted out of them once they were adopted. Even where such

[554] Sydnes 2001.
[555] Engler-Palma 2010, 477-478.
[556] Sydnes 2002, 374.
[557] Engler-Palma 2010, 479-481.

rules were put into place, they lacked effective enforcement and were undermined by free-riding non-members.[558] Here we begin to see the importance of the LOSC to the development of the global fisheries regime. The widespread adoption of EEZs during the 1970s circumscribed the roles of many RFOs, since a majority of fish stocks fell henceforth within the jurisdiction of one or a small number of coastal states. Some were re-established to take into account the changing jurisdictions, some became dormant, and a number were abolished.[559]

In the developing world, however, the EEZs had the opposite effect of creating incentives for states to utilize RFOs. In 1976, an estimated 64% of the world's fishery resource potential was off the coast of developing countries; however, most of those states lacked the technical and scientific capabilities necessary to exploit their resources. As an alternative, they turned towards bilateral agreements that gave foreign fleets access to their EEZs in return for fees and various forms of fisheries assistance.[560] To develop a common stance towards DWFNs regarding these access-agreements, monitoring, and enforcement, developing countries established a number of new RFOs. The FAO supported their efforts through a program adopted by COFI in 1979.[561]

Among DWFNs in the early EEZ period, the Soviet Union pursued the bilateral strategy most enthusiastically. More recently, the European Union has become a major

[558] Churchill and Lowe 1983, 204.
[559] Sydnes 2005, 122.
[560] Black 1983, 164-165. Carroz and Savini 1979 list 103 bilateral fisheries agreements that were concluded between 1975 and 1978, the majority stipulating access conditions. These include not only agreements between developing and industrialized countries, but also agreements between industrialized ones and developing ones. The Soviet Union and United States, with 23 and 18 agreements among them, respectively, concluded many of these deals.
[561] The South Pacific Forum Fisheries Agency was the first of these RFOs, established in 1979. The Latin American Organization for the Development of Fisheries (1984) and African Sub-Regional Commission on Fisheries (1985) and Regional Convention on Fisheries Co-Operating among African States Bordering the Atlantic Ocean (1995) followed. See Sydnes 2002, 376.

player, pursuing dozens of access agreements with African countries, primarily for the benefit of French, Spanish, Italian, and Portuguese fishing interests.[562] Some evidence suggests that the economic benefits of bilateral treaties concluded between these two actors and developing countries primarily benefit the former.[563] Environmental non-governmental organizations and the UN Environment Programme have criticized the EU and other DWFNs for over-exploiting poor coastal countries' resources, damaging local fishing interests, and undermining food security.[564] Thus, despite their intentions, the RFOs established by developing countries in the EEZ era appear to not have been particularly successful at helping their members extract concessions from DWFNs. By the second half of the 1990s, many of them were in a poor state, hampered by disagreements between member states and a lack of funding.[565]

The LOSC actually called on states to establish regional and sub-regional fisheries organizations to sustainably manage transboundary and high seas fisheries.[566] Therefore, the Fish Stocks Agreement's provisions on the expansion of RFOs' roles and responsibilities are consistent with the spirit of the LOSC. Yet it is in the particulars, discussed in the previous section, that normative conflict emerges. The FSA stipulates that states with a real interest in the management of straddling and migratory stocks are obligated to cooperate through regional institutions, even those that are not party to the treaty. Where regional institutions do not exit, states have a duty to establish them. States wishing to become members of a regional institution may not be excluded, except in the

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562 In 2014, the EU was party to 23 bilateral agreements, 20 of which were access agreements with African, Caribbean, and Pacific states. See European Commission 2014.
563 Black 1983; Kaczinsky and Fluharty 2002.
564 Brown 2002; Peta 2002.
565 Sydnes 2002, 378.
566 Sydnes 2001, 352.

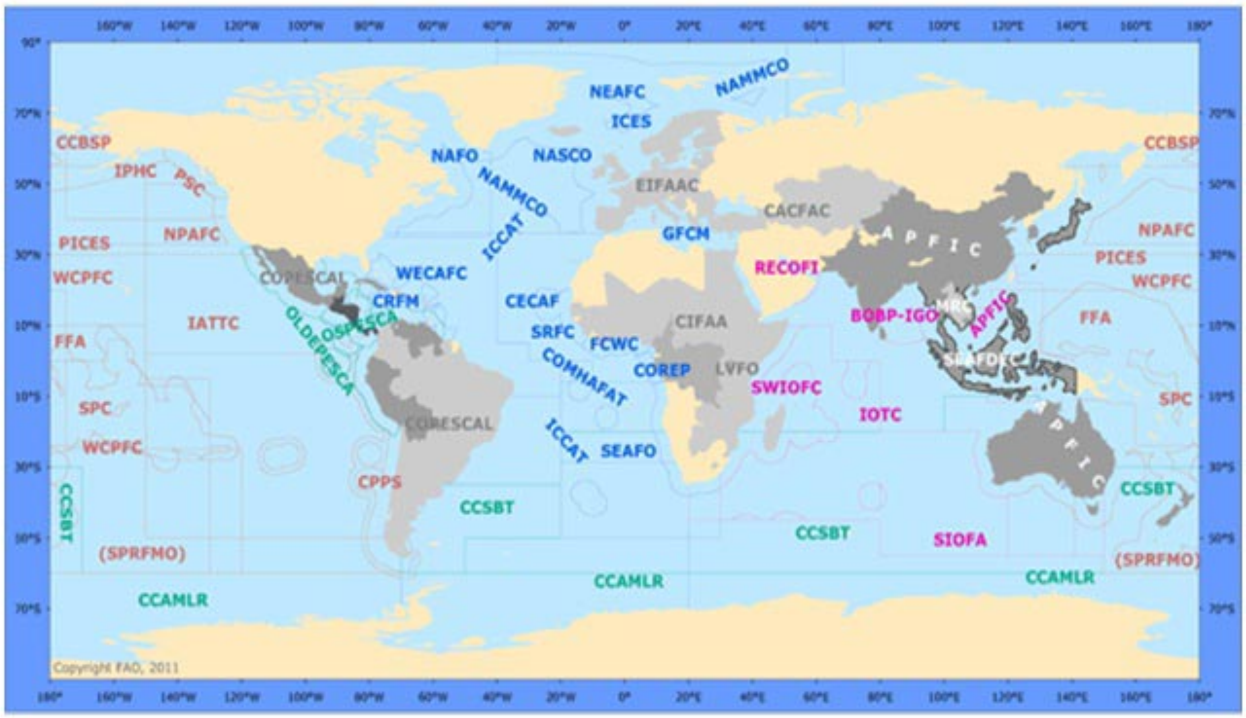
case of their refusal to comply with the institution's principles. Those not abiding by the obligations of these institutions may not have access to the relevant fisheries under management. RFOs and their member-states may take enforcement actions against uncooperative parties. All such institutions should abide by the precautionary principle and prioritize the protection of biodiversity and the ecosystems approach to ocean management.[567] In addition to introducing normative conflict into the fisheries regime, the FSA and its stipulations on RFOs has also lowered institutional integration. The FSA tasks RFOs with implementing the LOSC, but not all parties to the LOSC have ratified the FSA. Therefore, not all parties to the LOSC accept that RFOs have decision-making authority granted to them by the FSA. There are countries who under the FSA criteria should be members of particular RFOs but who have abstained from joining the organizations, thereby further fragmenting actor constellations.

Currently, there are 53 regional fisheries organizations whose jurisdiction covers much of the high seas.[568] Their areas of jurisdiction are marked in *Figure 4.3.* The United States, a strong supporter of the regional approach for years, has indicated its commitment towards utilizing RFOs for the purpose of fisheries management[569] and is a member of 14 such organizations.[570] The EU, which represents some of the most prominent DWFNs, is a member of 17 such organizations.[571] The FSA may have succeeded in increasing participation in RFOs across the board, as membership has grown substantially since the treaty has gone into effect. The number of cooperating non-

[567] UN Fish Stocks Agreement.
[568] Food and Agriculture Organization 2014.
[569] Bush 2006; U.S. Congress 2008.
[570] NOAA Fisheries 2014.
[571] European Commission 2014.

members has also increased.[572] Still, the same problems that plagued RFOs before the FSA – disagreements over allocation criteria, lack of enforcement powers,[573] and a lack of cooperation from non-members – continue to exist today, reducing their effectiveness at curbing overexploitation of the world's fisheries.[574]

Figure 4.3: Regional fisheries organizations in areas of jurisdiction



Source: International Game Fish Association

During the FSA negotiations, there was much controversy over the question of how decisions regarding the distribution of resources would be made.[575] Rather than resolving those sensitive questions – how to allocate of resources between members, to distribute fishing opportunities to new entrants, to address and take into account fishing

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[572] Hedley et al. 2007, 57.
[573] Enforcement is often difficult, as RFOs' responsibilities can extend over hundreds of thousands of square miles of water, leaving non-members free to fish without joining. See Kramer and Canty 2000; Webster 2007.
[574] Webster 2007, 11.
[575] Munro 2001, 275.

of non-members who may or may not be cooperating – the FSA left them to be addressed on an ad hoc basis by RFOs, a task most of the organizations have struggled to fulfill.[576] Many RFOs lack sets of rules for how resources between members should be distributed. Those that do often have ambiguous criteria that are non-binding and do not have a strong, independent secretariats that can recommend quotas.[577] Throughout the two review conferences that have been held, members have highlighted this problem and called for more equitable and transparent allocation criteria.[578] Another problem is that there are also cases of RFO members using unwarranted exclusion of non-members to restrict their legal access to the fisheries.[579] Therefore, the distributive conflict over straddling and migratory stocks that drove the creation of the FSA and the expanded roles of RFOs has, in large part, remained unresolved.

Many of these problems could be addressed, of course, by reforming RFOs. In a survey of the organizations, the FAO found their greatest concern was the need for greater legal and institutional assistance to manage or reform their organizations.[580] If member states provided greater support to RFOs and implemented stricter allocation criteria, problems of IUU fishing and conservation could be more effectively addressed. Yet this would take a lot of political will from member states whose economic interests could be jeopardized by RFO reform and the implementation of the FSA.[581] Decision-making procedures in most, if not all, RFOs are such that members are only bound by decisions that they approve.[582] This point was recognized at the 2010 FSA review

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[576] Hedley et al. 2007, vi.
[577] Engler-Palma 2010, 497.
[578] Hedley et al. 2007, 18; United Nations 2010.
[579] Serdy 2011.
[580] Ibid, 11.
[581] Organization for Economic Cooperation and Development 2009, 20.
[582] Henriksen, Honneland, and Sydnes 2006, 207.

conference, during which several parties, complaining about the poor performance of many RFOs, acknowledged that the organizations "could only perform as well as their Member States allow them to perform."[583] Because most RFOs were created before the FSA went into effect, members have used their institutional powers to secure their own access to resources and to prevent reform, while restricting new entrants.[584] Of those that have tried to institute reforms, few have been successful.[585] Many RFOs surveyed by the FAO have made little progress, if at all, towards implementing the FSA.[586] In response to the slow pace of FSA implementation, some states have sought out new forums to advance their fisheries interests.[587]

The role of regional arrangements has evolved in response to global institutional developments, and cannot be understood outside of the context of the wider regime. The FSA presented a renewed attempt to resolve the distributive conflict over straddling and migratory stocks by delegating responsibilities to RFOs. The expanded role of resulted in greater norm conflict, more fragmented actor constellations, and lower institutional integration. It did not, however, solve most allocation issues regarding straddling and migratory stocks. As a result, dissatisfied actors have continued to forum shop, seeking out new venues in which to address their concerns.

Forum Shopping and Conversion

583 United Nations 2010, 9.
584 The story of RFOs is similar to the ones Hanrieder 2014 finds in the World Health Organization's regional committees. Attempts to reform the bodies have been thwarted by path-dependent institutional design that has empowered those seeking to secure the status quo.
585 See Henriksen et al. 2006 for a detailed discussion of five RFOs' attempts and failures on instituting FSA relevant reforms.
586 Food and Agriculture Organization 2010, 18.
587 Implementation includes, but is not limited to, adopting the precautionary approach to fisheries management, and monitoring and ensuring compliance with conservation measures by member states and non-members. See Food and Agriculture Organization 2010, 5.

Discussions on high seas fisheries governance have broadened to include new concerns and have expanded into other venues. The coastal state-DWFN political cleavage has been the source of much of this activity, as see coastal states, dissatisfied with the status quo, engage in forum shopping to place fisheries on the agenda of a greater number of institutions. As a result, concerns over the fragmentation of the law of the sea have grown.[588] Yet when we look at the effects of forum shopping strategies, it appears that they have not had a significant impact on complexity. Actor constellations have changed slightly as different groups of states turn to different forums. These forums have taken steps towards engaging with fisheries governance, but no formal institutional changes have resulted, so the pattern of change has been conversion. States have been unanimous in the opinion that LOSC provides the overarching framework through which the global fisheries problems should be addressed, although there is little emerging consensus regarding whether the regime must be adapted to achieve conservation goals.[589] Additionally, the UN General Assembly continues to be the focal point in which oceans issues are addressed.[590] In 1999, upon the recommendation of the Commission on Sustainable Development, it passed a resolution creating the UN Open-ended Informal Consultative Process on Oceans and the Law of the Sea (Consultative Process), which facilitates an annual review of developments in ocean affairs.[591]

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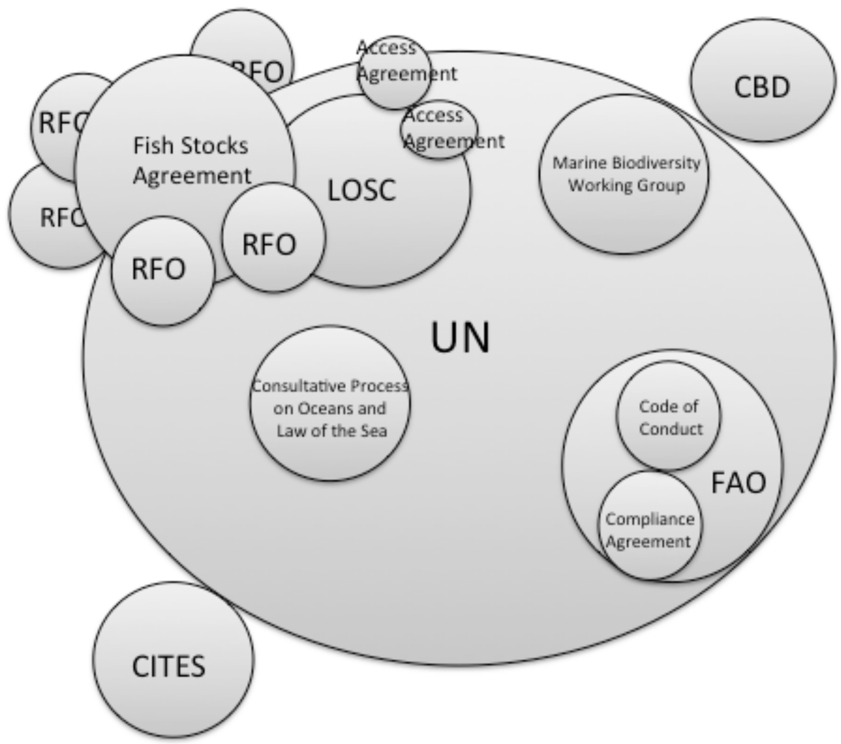
[588] See General Assembly 2011, 5.

[589] International Institute 2008a.
[590] La Fayette 2006, 72.
[591] International Institute 2006a.

The Convention on Biological Diversity (CBD) is one of the institutions the dissatisfied have turned to in their search for institutional change. Although the CBD makes no specific reference to the marine environment, coastal states have attempted to

Figure 4.4: Global fisheries regime, 1990s and beyond



reframe the problem of high seas fishing as a biodiversity issue. They succeeded in placing marine biodiversity on the CBD's agenda at the second conference of the parties in 1995. Iceland, Belize, and Australia emphasized the problem of the overcapitalization of fishing fleets and, along with other countries, called for an evaluation of its effects on marine biodiversity.[592] The resulting discussion turned out to be one of the most contentious at the conference,[593] with DWFNs like South Korea repeatedly complaining that these problems were outside the scope of the CBD.[594] The conference of parties

[592] International Institute 1995a.
[593] Goote 1997, 379.
[594] International Institute 1995a; 1995b; 2006b; 2008b; 2012a.

adopted the "Jakarta Mandate on Marine and Coastal Biodiversity," which created a work program in this area and signaled the beginning of the conversion process of the CDB towards fisheries issues. The document's emphasis on the ecosystems approach to management of marine living resources seems to have been inspired by the FSA negotiations that were also ongoing at the time.[595] The issue of marine biodiversity was raised at the 2002 UN World Summit on Sustainable Development and included on the resulting non-binding Johannesburg Plan of Implementation; in a General Assembly resolution in 2003; and again at the CBD conference of parties in 2004, which called for urgent action to improve the conservation of marine biodiversity in areas beyond national jurisdiction. The General Assembly finally established the Working Group on Marine Biodiversity Beyond Areas of National Jurisdiction in 2004 to study issues relating to the conservation and sustainable development in marine areas beyond national jurisdiction.[596]

Since these developments, there have been overlapping discussions on fisheries issues, particularly as they pertain to biodiversity, in the Consultative Process, Working Group, and CBD.[597] There has been some debate about the appropriate forum and instrument for addressing marine biodiversity. The US, Japan, South Korea, and Canada have repeatedly argued that institutional changes are not needed; rather, fisheries management, including biodiversity issues, should be addressed through the implementation of the existing legal framework, particularly through the strengthening and creation of new RFOs.[598] It is surprising to see Canada among this group of states, as it has traditionally aligned itself with coastal states rather than DWFNs. One potential

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[595] Goote 1997, 383.
[596] International Institute 2012b.
[597] The FAO, International Maritime Organization (IMO), and International Seabed Authority also examine issues related to biodiversity.
[598] International Institute 2006a; 2006b.

explanation is Canada was a founding or early member each of the six RFOs in which it participates.[599] This has likely provided the country institutional advantages that it can utilize in the organizations' decision-making process. These advantages could be undermined if a new agreement were negotiated under the United Nations, where Canada has relatively less bargaining power.

Over the last decade, the G77 has staked out positions reminiscent of those it held during UNCLOS III negotiations. The question of whether marine genetic resources in areas beyond national jurisdiction are subject to the freedom of the seas or the common heritage of mankind emerged in 2006. While the US and Japan made the case for the former, the G77/China insisted on the latter.[600] The G77/China went on to call for the initiation of a negotiating process that would address the issues of marine genetic resources, biodiversity, and environmental impact assessments, capacity building, and technology transfer, all under the framework of LOSC.[601]

The EU has developed an agenda that falls somewhere in the middle of the other two groups. Along with Australia, it has argued that RFOs are not an effective tool for high seas governance and that a new LOSC implementation agreement should instead be negotiated.[602] This marks a shift for the EU, which through the 1990s had been primarily concerned with advancing the interests of its distant-water fishing members. A possible reason for this change may be the organization's growing preoccupation with being a global leader in issues relating to environmental governance. The EU and G77 joined

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[599] Canada is a founding member of the International Commission for the Conservation of Atlantic Tunas (1968); the Northwest Atlantic Fisheries Organization (1979), whose secretariat it hosts; the North Atlantic Salmon Conservation Organization (1982); the North Pacific Anadromous Fish Commission (1952 and 1993, when it was re-established), and Western Central pacific Fisheries Commission (2001). It joined the Inter-American Tropical Tuna Commission in 1969.
[600] International Institute 2006b.
[601] International Institute 2011a.
[602] International Institute 2006a; 2006b; 2008a; 2012b.

forces on oceans issues in 2010, making a joint proposal for a new implementation agreement that addresses the concerns raised by the G77 but without the insistence on the common heritage of mankind principle.[603]

Throughout the Working Group meetings, the G77 raised the need for the work on marine biodiversity at the United Nations to be coordinated with the CBD.[604] Developing countries have used the adoption of the CBD's Negoya Protocol on Access and Benefit Sharing to push for a new LOSC implementation agreement. The Negoya Protocol, which went into effect in 2012, establishes a legal framework for the sharing of benefits arising out of the utilization of genetic resources, including plants, herbs, animals, and microorganisms. It presents a negotiating victory for developing countries,[605] and some threatened that if no action towards an implementation agreement is taken, they will utilize the Protocol to address marine biodiversity issues.[606] This strategy seems to have been somewhat successful, as observers credit the Protocol with generating momentum towards more concrete discussions in the Working Group.[607] This discussion once again demonstrates a general pattern of developing states seeking out universal membership institutions and more powerful states preferring smaller institutions like RFOs.

The Convention on International Trade in Endangered Species (CITES) is an additional forum in which fisheries discussions have taken place. The treaty's mandate includes all living organisms; indeed, two marine fishes were listed within a year of its entry into force in 1975. Still, throughout CITES' history, parties have been reluctant to

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[603] International Institute 2011a.
[604] International Institute 2008b.
[605] Buck and Hamilton 2011a.
[606] International Institute 2012b.
[607] International Institute 2011a.

utilize it to protect the fisheries: after the listing of the first two species, twenty-six years passed before another fish proposal was accepted.[608] The timing of this change is instructive. An analysis of votes on proposed listings of marine fish as well as anadromous[609] and catadromous[610] species, taken between 1976 and 2010, suggests that activity at CITES tracked closely to other global developments in fisheries management. Nineteen of the twenty-four votes took place beginning in 1992;[611] that is, parties began to turn more frequently to CITES as conflict over straddling and highly migratory fish flared up in other forums.

The United States is one of the actors who consistently attempted to shift fisheries discussions to CITES and has usually had the support of the European Union. These actors' preference for this forum may appear somewhat surprising, since universal institutions with sovereign-equality voting are usually the preference of developing countries. What sets CITES apart is its reliance on members to monitor and enforce its commitments through national legislation. The US and EU, which are known to use their outsize market power to influence international outcomes,[612] have the world's largest markets for trade in wildlife. The US alone is estimated to purchase a fifth of all wildlife products, a figure that has not changed since 1990;[613] this gives it significant enforcement power over the species listed under CITES. The US has been a vocal supporter of the FSA and its leadership on fisheries conservation has grown over the years. Domestically,

[608] Vincent et al. 2014, 575.
[609] These fish spend most of their lives in the sea, returning to freshwater only to spawn.
[610] These fish spend most of their lives in freshwater, migrating to the sea only to spawn.
[611] See Vincent et al. 2014.
[612] See Drezner 2007; Steinberg 2002.
[613] Alagappan 1990, 541; Wyler and Sheikh 2009, 2-3.

it has revised its fisheries policy in 2007.[614] Given these developments, it is not surprising that the US would turn to CITES to further its agenda.

Naturally, DWFNs, particularly Japan and South Korea, have not embraced discussions of fisheries issues at CITES. After growing debate regarding whether the institution presented an appropriate forum the fisheries, the US proposed the establishment of a Working Group that would address this topic in 1997. The US delegation was careful to point out that that the primary responsibility for fisheries management lay with RFOs and that the "Working Group on Marine Fish Species has nothing to do with facilitating the listing of marine fish species under CITES."[615] The proposal, while supported by the European Union and Australia, was opposed by a variety of states who usually found themselves at opposite negotiating sides; these include DWFNs like Japan and South Korea, many Latin American states, China, Iceland and a number of developing states. These delegations gave a variety of reasons for their opposition.[616] One commonality shared by all is a history of fishing interests and likely the fear that despite the United States' pronouncement, the Working Group would lead to more fish species being listed under the treaty.

As a few marine fish began to make it on the CITES list in the early 2000s, the US, again with the support of the EU and Australia, proposed another Working Group, this one to grapple with what is required of flag and port states when CITES-listed species are taken on the high seas. Japan opposed the measure,[617] but reversed its stand at

[614] Hedley et al. 2007, 68; U.S. Congress 2008.
[615] "Establishment of a Working Group on Marine Fish Species" 1997, 813.
[616] "Summary Report of the Committee I Meeting" 2007.
[617] "Tenth session" 2004.

the following conference of parties in 2007, where the proposal had broad support.[618] Despite this progress, highly economically valuable fish have generally not been included.[619] Japan has been quite active in its opposition to the listing of profitable species and has been able in the past to gain the support of many developing countries by highlighting the potential economic ramifications of trade bans on fish.[620]

The conflict over the inclusion of the Atlantic Bluefin tuna is instructive. As early as 1992, Sweden proposed listing some stocks of the species under both Appendix I and II.[621] This drew opposition from the Japanese delegation and the nation's fishermen, who protested outside the conference.[622] The two parties struck a deal that in exchange for Sweden withdrawing its proposals, Japan would move to address the issue at the International Commission for Conservation of Atlantic Tuna (ICCAT), an RFO. Yet in an illustration of the general shortcomings of many RFOs, the tuna stock continued to plummet as the members of ICCAT set quotas above those advised by scientists, and both legal and illegal fishing above those quotas continued. Another proposal to list the species in 2010 was defeated, despite agreement that it met the criteria for inclusion in Appendix I. These efforts may not have been a lost cause, however, as the CITES discussion did create some political will among ICCAT members, which subsequently reduced quota levels.[623] These developments suggest that the decade of attempts by activist states to engage CITES in the issue of fisheries have had some success.

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[618] "Summary Record of the 11th session of Committee II" 2007.
[619] Clayton 2010; International Institute 2004c.
[620] Clayton 2010.
[621] Appendix I includes species threatened with extinction whose trade is only permitted in special circumstances. Appendix II includes species whose trade must be controlled to ensure survival.
[622] Vincent et al. 2014, 569.
[623] Vincent et al. 2014, 572.

Over the last two decades, agitators for institutional change have managed to place fisheries discussions on the agendas of a number of new forums. Although the LOSC remains the undisputed focal institution of the fisheries regime, actor constellations have changed as groups of states are promoting the use of various institutions through which to deal with lingering fisheries issues. Yet overall, the resulting process of conversion has not contributed significantly to complexity, as the forum shopping efforts of the agents of change outlined in this section have not resulted in the creation of any new laws and as such, have not affected norm conflict or institutional integration.

Conclusion

Since its emergence in the mid-1970s, the global fisheries regime has gradually grown more complex. The patterns of institutional development and the state choices that triggered them cannot be understood outside of the context of the LOSC, as the adoption of the convention's fisheries provisions shaped the forces that would give rise to institutional change. The introduction of EEZs created many stakeholders in the world's coastal states, rendering the institution's place at the center of the regime immune to serious challenges. The EEZ also shaped the three independent variables. First, the new arrangement's effects on straddling and migratory stocks determined the coalition of the dissatisfied as well as the status quo defenders. Second, its enclosure of the vast majority of the world's fish stocks significantly lowered the intensity of distributive conflict. Because the stakes of distributive conflict have been low, the dissatisfied have had little incentive to displace the focal institution. Third, LOSC's amendment provisions created low institutional inertia. But because the coalition of the dissatisfied has been small relative to the number of states needed to change the focal institution from within, the agents of change have had to seek options outside of the LOSC.

This case study analysis demonstrates that distributive conflict undoubtedly served as the trigger for institutional change. Unable to change the focal institution because of their small coalition, the dissatisfied pursued two strategies: institutional proliferation and forum shopping. The creation of new instruments resulted in overlapping layering and generated greater complexity through the introduction of normative conflict, the lowering of institutional integration, and the fragmenting of actor constellations. These effects are primarily attributable to the Fish Stocks Agreement, which generated norm conflict by providing state parties rights that are incompatible with the LOSC. Because its state parties do not overlap with those of the LOSC, the FSA also changed actor constellations. The delegation of responsibilities to regional fisheries organization, which have not been accepted by the FSA's non-parties, fragmented institutional integration in the regime. The Compliance Agreement has also contributed to greater complexity because its low number of ratifications has further contributed to the fragmentation of actor constellations in the regime. Because introduction of new institutions has not effectively reduced the distributive conflict over the allocation of high seas fisheries, the agents of change have also pursued forum shopping, which has resulted in the conversion of institutions previously uninvolved in fisheries issues. As discussed in chapter 2, conversion only modestly contributes to greater complexity because it merely affects actor constellations.

Although complexity has increased, the fisheries regime as a whole is still mostly coherent. All relevant state actors continue to support the LOSC as the undisputed focal institution and the United Nations as the primary venue for fisheries issues. This support can be attributed to the broad institutional benefits the LOSC confers onto state parties through the EEZ. Coastal states and their fishing industries have much at stake in preserving the core of the regime. Although we can expect to see further institutional changes in the future as states continue to seek to protect their access to high seas fisheries, such changes are unlikely to challenge to position of the focal institution.

The history of the global fisheries is full of unsuccessful attempts to fundamentally alter the institutional status quo. Prior to the adoption of the LOSC and the emergence of the current regime, states seeking institutional change made formal attempts to codify oceans law through United Nations treaties and held informal talks about creating an instrument outside of the UN. These efforts were unsuccessful because of the unwillingness of other states to accept the proposed instruments. The case of the Fish Stocks Agreement is especially telling. This agreement deals with an issue low in distributive conflict. It was the result of a years-long effort by the coalition of the dissatisfied to achieve institutional change. And yet, Latin American states, a major bloc within the coalition, have refused to accede to it because they reject certain provisions. Getting a significant number of states to agree to negotiate a new institution can be challenging enough; securing the necessary ratifications to fundamentally alter the status quo often proves an insurmountable hurdle.

Finally, in contrast to the ozone case, functionalist accounts are not as helpful in explaining the long-term processes of institutional development in the fisheries. When industrial-scale fishing began in the mid-20th century, scientists and therefore policymakers possessed little understanding of the impact it would have on particular species or ecosystems. Even as states were negotiating the LOSC, there was a lack of reliable data regarding the size of particular stocks and the pressure they could sustain. Over the last several decades, fisheries and conservation science has become significantly more precise, and in turn, so has policymakers' understanding of the costs and benefits of cooperation.[624] To be sure, this decrease in uncertainty about the state of the world drove policymakers' decision to implement the Fish Stocks Agreement through regional instruments. There was broad agreement that such bodies could achieve the most efficient fisheries management by using science-based decision-making. Still, the decrease in uncertainty does not help us explain why states established the FSA outside of the focal institution, for example. It is also not helpful in accounting for the broader trend of greater complexity in the fisheries regime over time. Overall, discussions about the uncertainty regarding the causes of the environmental problem, the most effective regulations or their economic implications did not appear at the forefront of states' institutional creation or selection. Along each step in the evolution of the fisheries regime, including within current active RFOs, the primary concerns of states has been the allocation of fisheries resources.

[624] See Gjerde 2006, 282-289 for a summary of advances in fisheries science.

CHAPTER 5

THE CLIMATE REGIME

Economic and population increases have driven the growth of greenhouse gases (GHGs) that are emitted into the atmosphere since the pre-industrial era. Emissions of such gases, which include carbon dioxide, methane, and nitrous oxide, accelerated with the industrial revolution and have increased due to human activity over time. Scientists have linked the resulting unprecedented levels of concentration of GHGs in the atmosphere to the warming of the climate system observed since the mid-20th century. The most direct effects of this warming are increases in average air and ocean temperatures, widespread melting of snow and ice, and rising global average sea levels. Scientists expect that global temperatures will continue to rise over the 21st century regardless of any mitigation measures that may take place, causing increasingly extreme weather patterns on all continents.[625]

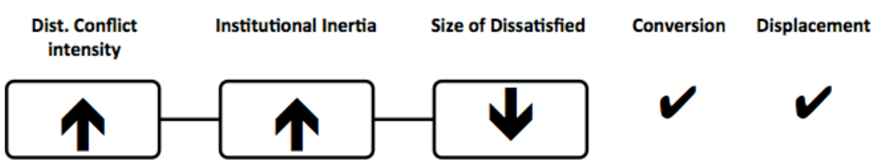
These changes have and will continue to impact natural and human systems across the globe. Scientists predict with a high level of confidence that, first, a large number of animal and plant species face greater risks of extinction because they will be unable to adapt to significant ecosystem shifts caused by climate change. Second, the decline of fisheries and agricultural yield will create food insecurity in both tropical and temperate regions. Third, climate change will threaten water supplies, particularly in sub-tropical regions, due to the depletion of renewable surface water and groundwater resources. Fourth, health problems that already exist will be exacerbated in many regions. This is especially true for low-income countries. Given these alarming predictions, it is not surprising that scientists also expect increasing temperatures to contribute to

[625] See Intergovernmental Panel on Climate Change 2013.

aggregate economic losses and violent conflicts, although the empirical evidence on which they base these conclusions is more limited.[626] It is difficult to overstate the severity and complexity of problems anthropogenic climate change presents.

While the general theory behind climate change has existed since the end of the nineteenth century,[627] the issue did not elicit an international response until the 1980s, prompted by mounting scientific evidence as well as a significant heat wave and drought in the summer of 1988.[628] Since then, two distinct phases of climate change governance have emerged. The first phase entailed the construction of a regime under the United Nations umbrella, with the 1992 United Nations Framework Convention on Climate Change (FCCC) and the 1997 Kyoto Protocol at its center. This regime displayed a low degree of complexity: the core institution had almost universal membership, decision-

Figure 5.1: Independent variables and development processes in the climate regime



making power rested with the Conference of Parties (COP) as outlined in the FCCC, and there were no normative conflicts regarding climate governance between the UN framework and other institutions.

During the second phase, which began in the early 2000s, the regime became markedly more complex. An understanding of the ways in which the focal institution distributed the costs and benefits of cooperation is crucial to explaining this development. Developing and European states benefitted most from the status quo established by the

[626] Intergovernmental Panel on Climate Change 2013, 13-16.
[627] See LeTreut et al. 2007 for a history of climate science.
[628] Bodansky 1993.

Kyoto Protocol. The former secured financial incentives and an exemption from obligations, while the latter believed global emissions regulations would render their economies more competitive. A small number of industrialized countries, including the United States, formed the coalition of the dissatisfied. The intensity of distributive conflict associated with climate change is high, since the problem implicates all economic activity. Naturally, the dissatisfied perceived the status quo as imposing on them an exceptionally high economic burden relative to developing and European states; they therefore sought to change it. Because the coalition was small but institutional inertia high, the dissatisfied were unable to act through the focal institution.

As the theory outlined in chapter 2 predicts, displacement and conversion resulted from the institutional choices of the dissatisfied, generating greater complexity in the regime. The change agents were clear about their intent to create an alternative to the

Table 5.1: Key post-Kyoto institutions addressing climate issues, processes of institutional change, and affected dimensions of regime complexity

	Displacement			**Conversion**	
Institution	Asia Pacific Partnership	Methane to Markets Partnership	Major Emitters Forum	G8	APEC
Institutional Integration	✔	✔	✔		
Actor Constellations	✔	✔	✔	✔	✔
Norm Conflict	✔	✔	✔		

FCCC process. The United States, which as the world's most powerful country faced low capacity restraints, was particularly active. Under George W. Bush, the US engaged in institutional proliferation, creating bilateral and limited multilateral agreements that were intended to draw support away from the focal institution. The dissatisfied also placed climate change on the agenda of previously uninvolved institutions, in some cases succeeding in converting them towards addressing the problem. These processes lowered institutional integration, as they moved climate-related policymaking to outside of the UN system. They also fragmented actor constellations, as they included various groups of members, some of which were not party to the Kyoto Protocol. Finally, the newly created institutions promoted a bottom-up approach to climate governance that was not in normative coherence with the focal institution.

While the processes of displacement and conversion are consistent with the distributive-historical theory, the case study also yields two unexpected findings that indicate shortcomings. First, the theory does not make clear predictions about the institutional choices of the status quo powers. Within the climate regime, those states also engaged in forum shopping and institutional proliferation. They did so, counter-intuitively, to strengthen the focal institutions, as well as their bargaining positions within them. European states as well as India and China created a number of bilateral institutions with the intent of incentivizing other states against defecting from the FCCC process. This resulted in the process of overlapping layering and a modest increase in complexity. The Europeans also forum shopped, bringing climate change discussions to the UN Security Council, World Trade Organization, and G8. While their efforts were blocked in the first two institutions, they succeeded in converting the G8.

Second, after more than a decade of fragmentation induced by the institutional choices of various actors and the eventual abandonment of the Kyoto Protocol, states have refocused on the UN process and have negotiated the Paris Agreement under the

UN umbrella. If adopted, this agreement will result in nested layering and could stabilize and perhaps even reduce fragmentation in the regime. This indicates that development does not always trend towards greater complexity. Although many factors contributed to this shift, US re-engagement under Barack Obama played a key role. Obama continued his predecessors' strategy of institutional proliferation but directed the new arrangements towards reviving the UN process. These actions have resulted a displacement of the regime's former norms and simultaneous strengthening of its core global institutions.

This chapter proceeds by describing the formation of the climate regime within the UN system and identifying the primary political cleavages and distributive conflicts that emerged during negotiations. The following section identifies how the newly created institutions distributed the benefits and costs of cooperation. The chapter then identifies the values of the independent variables and lays out the theory's expectations. The processes of conversion, overlapping layering, and displacement are described in subsequent sections. The most recent developments in the climate regime are discussed before the conclusion.

Regime Formation: The UN Framework Convention on Climate Change, the Kyoto Protocol, and the Costs and Benefits of the New Status Quo

The Canadian government sponsored the first significant international conference on the problem of climate change. Although over one hundred state officials attended the 1988 Toronto Conference, it was not officially governmental in nature, and the concluding statement calling for a comprehensive framework convention to protect the atmosphere[629] was more heavily influenced by the scientists and environmentalists that

[629] See "The Changing Atmosphere: Implications for Global Security Conference Statement" 1988.

Timeline of Key Events and Developments in the Climate Regime

- 1988 first large international conference on climate change takes place in Toronto
- 1988 WMO and UNEP create Intergovernmental Panel on Climate Change
- 1992 states adopt UN Framework Convection on Climate Change
- 1997 FCCC Conference of Parties adopts Kyoto Protocol
- 2001 United States seeks to withdraw from Kyoto Protocol
- 2003 US launches International Partnership for Hydrogen Economy and the Carbon Sequestration Leadership Forum (CSLF)
- 2004 US launches Methane to Markets Partnership
- 2005 Kyoto Protocol enters into force
- 2005 US launches Asia-Pacific Partnership for Clean Energy and Climate
- 2005 UK launches G8 "Gleneagles Dialogue on Climate Change"
- 2007 UK initiates climate change debate at UN Security Council
- 2007 APEC embraces climate change with the "Sydney APEC Leaders Declaration on Climate Change, Energy Security and Clean Development,"
- 2007 US launches Major Emitters Forum on Energy Security and Climate Change
- 2009 FCCC Conference of Parties takes note of Copenhagen Agreement
- 2010 US launches Energy and Climate Partnership of the Americas
- 2012 first commitment period under Kyoto Protocol expires
- 2012 FCCC Conference of Parties adopts Doha Amendment to the Kyoto Protocol
- 2014 US and China make Joint Announcement on Climate Change
- 2015 FCCC Conference of Parties adopts Paris Agreement

were also in attendance.[630] Subsequent discussions of the climate issue moved increasingly to a number of intergovernmental forums. In 1989, the G-7, the Non-Aligned Movement, the UN General Assembly, the Commonwealth of Nations, and the US-Soviet Summit,[631] for example, all addressed the climate problem. That same year, there were at least seven intergovernmental conferences hosted by as many states on the subject. A range of representatives from developed and developing countries, international organizations, scientists, and nongovernmental organizations attended these meetings. Due to the variation of interests represented at all of these conferences, the declarations and statements emerging from them vary accordingly in content and scope; still, they echo the Toronto Conference statement in that they all call for the creation of a framework or umbrella convention on climate change, often identifying the United Nations as the most appropriate forum for action.[632]

The World Meteorological Organization (WMO) and UN Environmental Programme (UNEP) took the first steps towards this goal by creating the Intergovernmental Panel on Climate Change (IPCC) in 1988 at the strong urging of the United States.[633] The US supported the creation of the IPCC as a way to assert government control over the framing of the climate issue, which had at that point

[630] Bodansky 1993, 462.
[631] Lauter 1989.
[632] See "The Changing Atmosphere: Implications for Global Security" (Toronto Conference Statement) 1988; United Nations General Assembly 1989; "Protection of the Atmosphere: Statement of the Meeting of Legal and Policy Experts" (Ottawa Statement) 1989; "International Conference on Global Warming and Climate Change: Perspectives from Developing Countries" (Tata Conference Statement) 1989; "Declaration of the Hague" 1989; "Helsinki Declaration on the Prospect of the Ozone Layer" 1989; G7 1989; "Tokyo Conference on the Global Environment and Human Response Toward Sustainable Development, Chairman's Statement" 1989; Commonwealth of Nations 1989; "The Noordwijk Declaration on Atmospheric Pollution and Climate Change" 1989; Small States Conference on Sea Level Rise 1989; "The Cairo Compact: Toward a Concerted World-Wide Response to the Climate Crisis"; Non-Aligned Movement 1989.
[633] Bodansky 1993. The US initially opposed a climate convention, only giving in to pressure on the issue in 1989. That same year, the UN General Assembly unanimously passed the "Resolution on the Protection of the Global Climate," which called for the adoption of a framework convention on climate change.

primarily been shaped by scientific and environmental communities. The IPCC provided a scientific and policy assessment of the problem and within two years, the UN General Assembly had established an Intergovernmental Negotiating Committee (INC) to develop a climate change convention, a task it completed within fifteen months.

United Nations Framework Convention on Climate Change

The initial process of institutional selection in the climate regime occurred under conditions of acute uncertainty about the state of the world. The first IPCC assessment report, published in 1990, states that scientists are "certain" that human activities are increasing the concentration of GHGs in the atmosphere and are thereby enhancing the greenhouse effect.[634] At the same time, the report concedes "there are many uncertainties in our predictions particularly with regard to timing, magnitude and regional patterns of climate change."[635] These uncertainties of course made it difficult to assess the costs and benefits of any potential global regulations and mitigation measures. The second assessment report, released in 1995, stressed this point. Because of the difficulties of applying traditional cost-benefit analyses to the climate problem, "both costs and benefits may be hard, sometimes impossible, to assess." The estimates of mitigation options as well as potential physical damages caused by climate change at the time varied widely.[636]

Although distributive conflicts did not fully crystalize until the negotiations for a framework convention actually began, actors' concerns and lack of knowledge about the economic impact of a climate change agreement were apparent early on. During the first conference organized to address the concerns of developing countries, participants

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[634] IPCC Overview 1992, 52.
[635] Ibid. 53.
[636] Bruce, Lee, and Haites 1996, 9.

worried about the trade-offs between climate change mitigation and economic development. They concluded that industrialized states should pay the majority of the costs associated with a response to the climate problem;[637] to some extent, developed states agreed.[638] Still, individual countries such as the United States,[639] the Soviet Union, and Japan also all expressed concern that a global treaty could negatively affect their economic growth.[640] Others, particularly within the European Community, embraced a global climate treaty as an economic opportunity.[641]

The combination of distributive conflict and uncertainty about the state of the world might lead one to expect states to engage in forum shopping as well as prolonged and contentious bargaining efforts, yet this was not the case. Compared to the fisheries and ozone regimes analyzed in the previous chapters, the agreement on a focal venue for climate negotiations formed quickly. This is because policymakers looked to the experiences associated with the LOSC and Vienna Convention as models for the climate regime, copying the features they saw as most successful. The Canadian government advocated for a comprehensive "Law of the Atmosphere" convention modeled after the LOSC,[642] yet this approach was not popular. At this time, policymakers largely viewed the LOSC as a failure. States had spent nearly a decade negotiating the detailed and comprehensive convention, only to have the US and other key powers reject the treaty

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637 "Tata Conference Statement" 1989.
638 See "Noordwijk Declaration on Atmospheric Pollution and Climate Change" 1989; "Declaration of the Hague" 1989; "Tokyo Conference on the Global Environment and Human Response Toward Sustainable Development, Chairman's Statement" 1989.
639 Taylor 1987.
640 Ibid.; Lauter 1989.
641 Paterson and Grubb 1992, 302. These conflicts will be discussed in further elaboration below.
642 Zaelke and Cameron 1990, 277.

and keep it from entering into force. They feared that a similar approach to the climate problem would be overly ambitious and slow the pace of progress.[643]

In contrast, the perceived success of the 1985 Vienna Convention on the Protection of the Ozone Layer and the Montreal Protocol accounts for the swift agreement on a framework convention within the UN system and subsequent protocol.[644] The 1987 Montreal Protocol inspired policymakers in various parts of the world to tackle the climate change almost immediately, even within the climate-skeptic Reagan administration.[645] A number of the documents discussed above formally called on the climate framework to be modeled after the ozone process.[646] The drafters of the concluding statement of the Toronto Conference, for example, were greatly influenced by the success of the Montreal Protocol.[647] In 1989, the United States organized a multi-disciplinary workshop as chair of the IPCC's Response Strategies Working Group, where there was near universal support for a climate framework convention modeled after the Vienna Ozone Convention.[648] That same year, both the US and United Kingdom prepared drafts of a climate convention that were based on the Vienna Convention.[649] The key features of the ozone process policymakers widely saw as appropriate for climate change included the creation of a general framework followed by specific protocols, the

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[643] Ibid.; Sebenius 1991, 116.
[644] See Victor 2001, 14-17 for a general discussion. The author argues that policymakers were misguided in important ways in their application of the ozone approach to the climate problem. He concludes that the design of the Kyoto Protocol was inadequate for addressing climate change. See also Zaelke and Cameron 1990, 273-276.
[645] Taylor 1987 quotes the head of the US Environmental Protection Agency as stating that some of his colleagues in other states saw the ozone talks as "a sort of model that could be used" to address greenhouse gas emissions.
[646] See "Ottawa Statement" 1989; "Tata Conference Statement" 1989.
[647] Bodansky 1993, 462.
[648] Ibid., 473; Sebenius 1991, 117-8.
[649] Bodansky 1993, 482.

attainment of the widest possible participation and consensus decision-making, and an agreement subject to modification without the need for re-ratification.[650]

It is possible that this process of institutional creation is a result of functionalist logic, but there is little evidence to support such reasoning. For example, policymakers were explicit that their choice for flexibility in the Montreal Protocol was the result of uncertainties about the state of the world. In contrast, their decision to use the same model for climate change appears to be primarily based on its success, rather than its applicability to the particulars of the cooperation problem. As discussed in detail in a later section, inertia in the climate regime's focal institutions is exceptionally high as compared to the ozone regime. Had policymakers been concerned with designing the institutions in a way that would allow them to respond to changes in the magnitude of uncertainty, functionalists would not expect this to be the case.

Distributive Conflict and Political Cleavages

During negotiations for a framework convention, three political coalitions emerged. While some of these were anchored to an existing institutional framework, others were created specifically to address the issue of climate change. There were few parties that did not belong to any single coalition, and indeed, many belonged to several negotiating blocs. This created a complex system of alliances, with some states belonging to coalitions that represented competing interests. Although negotiating dynamics in the climate debate have since evolved, the general outlines of these coalitions still remain.

The most significant political cleavage was between developed and developing countries. Developing countries' position during negotiations echoed their general stance

[650] Sebenius 1991, 118.

on global environmental governance that emerged during the UN's very first environmental conference in 1972. Generally, they viewed environmental concerns as a distraction from the more important tasks of development and poverty alleviation. While environmentalists in developed countries viewed industrialization as the main cause of environmental degradation, developing countries saw it as their way to achieve economic prosperity.[651] This position was even more amplified during FCCC negotiations, as energy use is intimately related to economic development. Developing countries saw the industrialized world as historically responsible for the climate problem, and noted the great differences in current-day emissions, as developing country per capita emissions were barely one tenth of the Organization for Economic Cooperation and Development (OECD) average at the time.[652] Speaking through the G-77, they asked "developed countries to undertake meaningful and specific commitments on stabilization and reduction of emissions of carbon dioxide and other greenhouse gases,"[653] as well as for technology transfers and financial resources to help them respond to the climate problem.[654]

At the outset of negotiations, there was general agreement within OECD countries that they would indeed take the lead in addressing the climate problem.[655] Yet as the negotiating process continued a second fault line emerged, among OECD states. Developing states' arguments were received with some sympathy by the European Community (EC), which has long held that industrialized states should shoulder most of

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[651] Najam 2005, 308.
[652] Paterson and Grubb 1992, 297.
[653] "Kuala Lampur Declaration on Environment and Development" 1992.
[654] Ibid.; Najam et al. 2003.
[655] Bodansky 1993, 478.

the burden associated with emission reductions.[656] The EC also viewed climate change as a serious threat. In the years before the FCCC negotiations, the EC embraced the precautionary principle, first promoted by West Germany in the 1980s, when it came to matters of the environment; this extended to the issue of climate change.[657] But in this threat, the EC also saw an economic opportunity, since it believed it could reap benefits by being a leader in the development of clean technology and improved energy efficiency.[658] For these reasons, with the support of Australia, New Zealand, and Canada, the EC advocated for the adoption of binding, quantitative limits on GHG emissions.

This goal was vigorously opposed by the United States, joined by Japan and the Soviet Union, as it disagreed with the EC on all of the important points. Instead of embracing the precautionary principle, the George H. W. Bush administration presented the science behind climate change as filled with uncertainties.[659] It also viewed the relationship between environmental protection and economic growth as a zero-sum game, expressing great concern about the economic costs of climate change mitigation.[660] Legally binding emissions targets and timetables were therefore out of the question for the United States. Instead, Bush administration officials preferred what has since become known as a "bottom-up approach." This strategy involves the development of national programs that emphasized flexible, market-based approaches, rather than on international

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[656] The European Commission, for example, has noted that the "EU has acted on the principle that industrialized nations should take the lead in combating climate change, since those same countries are responsible for the great majority of post-Industrial Revolution emissions, which are at the heart of the global warming problem." See Schmidt 2008, 92.
[657] Schmidt 2008, 86.
[658] Paterson and Grubb 1992, 302. Szarka 2012 argues that today's European Union has accepted the propositions of ecological modernization theory, which argues that economic growth and environmental protection are compatible and mutually reinforcing.
[659] See Gray and Rivkin 1991.
[660] Bodansky 2005, 154; Paterson and Grubb 1992, 302. At the time, the US was the world's largest emitter of CO_2, its second largest producer of oil, and its largest producer of coal. See Andersen 1991.

programs.[661] The emphasis on economic costs, preference for market-based approaches, and refusal to accept the consensus of climate scientists would continue to be central to the positions of future US administrations.[662] In addition to refusing any firm commitments on climate change, the US was also hostile to developing states' demands for significant technology transfers.[663]

Finally, while they agreed that industrialized states should assume primary responsibility for responding to the climate problem with commitments and finances, countries belonging to the G77 coalition were not unified on every issue. Their disagreements about the relative importance of climate change mitigation and economic development marked the third central division in FCCC negotiations. There were three main negotiating coalitions. The Alliance of Small Island States (AOSIS) was the most vocal of developing state groups to advocate for a strong climate regime under which both industrialized and developing states would have obligations. Formed in 1990 under the leadership of Vanuatu, the Maldives, and Trinidad and Tobago, AOSIS initially consisted of twenty-four island states, some of which are no more than two meters above seal-level at their highest point and are thus very vulnerable to the effects of climate change.[664]

Members of the Organization for Petroleum Exporting States (OPEC), led by Kuwait and Saudi Arabia, proved to be the counter-weight to AOSIS. OPEC states were primarily concerned with maintaining high oil prices and avoiding reductions in emissions from the burning of oil, and therefore preferred to have the weakest regime

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[661] Gray and Rivkin 1991, 61.
[662] See McGee and Taplin 2008; Blanchard 2007.
[663] Paterson and Grubb 1992, 302.
[664] Betzold et al. 2012.

possible, if any. To achieve its ends, OPEC assumed an active role in the FCCC negotiations, questioning the science of climate change and attempting to block the progress of negotiations.[665] Large developing states like China, India, and Brazil staked out positions somewhere between AOSIS and OPEC. They emphasized the issues of development and equity, arguing for the creation of a minimalist institutional structure under which strong commitments would only be imposed on developed states.[666]

The 1992 Framework Convention on Climate Change (FCCC) that resulted from these negotiations became the focal institution of the newly emerging climate regime. It enunciated the regime's objective as the stabilization of atmospheric concentrations of GHGs at safe levels; established decision-making procedures; promoted the collection and review of relevant data; created a financial mechanism;[667] and encouraged national action to tackle climate change. The FCCC is, however, also notable for what it did not do. Although most states were supportive of the creation of a framework convention, there was considerable disagreement regarding the imposition of strong substantive commitments on reductions of GHG emissions; the final document omitted such commitments.[668] It is in regards to this issue that divisions between negotiating blocs had manifested themselves most clearly.

Kyoto Protocol

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[665] Barnett 2008, 1; Kasa et al. 2008, 123.
[666] Bodansky 1993, 480.
[667] The UNFCCC created the Least Developed Countries Fund and Special Climate Change Fund. These are managed by the Global Environmental Facility (GEF), which is the funding body for sustainable development projects. The GEF has ten partner organizations, including the UNEP, UNDP, and World Bank, which develop and implement projects. See Michonski and Levi 2010, 6.
[668] Bodansky 1995.

The FCCC entered into force in 1994 after receiving fifty ratifications and continued to acquire state parties at a fast pace. By the end of the following year, 151 countries had acceded to the treaty. Yet most were not satisfied with the state of the climate regime, agreeing that the FCCC's commitments were inadequate. This included a more sympathetic United States under the new Clinton administration. There was again a strong consensus that continuing to work within the United Nations framework was the best way forward. Therefore, the first Conference of Parties (COP-1), taking place in 1995, established an ad hoc committee to begin negotiating a new agreement.[669] It also adopted the "Berlin Mandate," which, noting that the majority of historical and current GHG emissions originated in the industrialized world, tasked only developed country parties with adopting additional mitigation commitments.[670]

Distributive Conflict and Political Cleavages

The 1997 adoption of the Kyoto Protocol followed two years of negotiations. Three main issues created divisions similar to those that emerged in the FCCC negotiation process. First, the United States and its allies pushed for the inclusion of a mechanism through which developing states could voluntarily assume emission limitations. Developing countries, of course, opposed this idea, arguing once more that they were not responsible for the majority of historical or current GHG emissions.[671] Second, industrialized states disagreed about which emissions limitation targets should be

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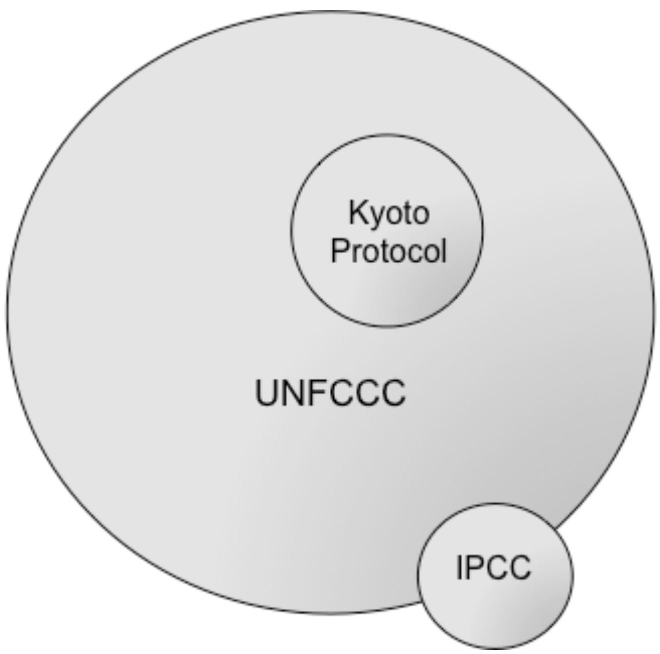
[669] The COP, which meets annually, is the main decision-making body of the FCCC. Its tasks include fleshing out treaty obligations, reviewing the adequacy of existing commitments, and launching negotiations to expand obligations. See Bodansky 1993, 533; Rajamani 2008, 915.
[670] Conference of the Parties 1995, 4. The United States lobbied for the inclusion of mitigation commitments for developing states as well but was not successful. See Bodansky 2005, 158.
[671] Kamando 1997.

adopted. While the European Union preferred a ten percent reduction in emissions below 1990 levels by 2010, another group of states, dubbed JUZCANZ, favored much weaker targets. This group included the US and Japan, as well as Canada and Australia, which had sided with the Europeans during FCCC negotiations.[672] Third, there were disagreements about the inclusion of flexibility mechanisms in the new treaty. Again, the United States and the EU found themselves at opposite sides of this debate. The US wanted to include mechanisms that would give parties credit for emissions reductions in other states as well as for forest and agricultural activities that remove CO_2 form the

Figure 5.2: Climate Regime, 1997



atmosphere. Echoing the first Bush administration, Clinton negotiators maintained that states should be able to achieve reductions in the most flexible, cost-effective manner possible.[673] The US had used such mechanisms extensively in domestic pollution control

[672] Andresen and Agrawala 2002, 47.
[673] Bodansky 2005, 159.

programs since the 1980s.[674] The EU, supported by developing states, argued that parties should have to meet their targets through domestic GHG reductions.[675]

The final treaty presented mixed victories. Developing countries achieved their primary goal: they received the status of Annex II parties, meaning they were not obligated to reduce emissions. The European Union won out on the inclusion of emissions targets, as the Protocol adopted the more stringent commitments it had advocated. Finally, the United States was successful in obtaining the inclusion of flexibility mechanisms in the treaty.[676] Still, this victory was not enough to ensure its ratification of the Kyoto Protocol. The US Senate, citing economic concerns and under pressure from the fossil fuel industry and labor groups, passed the Byrd-Hagel Amendment by a vote of 95-0. This resolution opposed any US commitments that did not also include developing countries. Thus, although President Clinton supported and signed the Kyoto Protocol, he never submitted it to the Senate for approval.[677] The world's biggest absolute and per capita emitter of GHGs did not commit itself to the treaty created to mitigate climate change.

To become effective, the Kyoto Protocol required the ratification of 55 states accounting for at least 55% of GHGs emitted by Annex I parties. It was not until 2005 that the latter of these requirements was met. By that time, the Protocol had been ratified by 144 states, of which 34 were Annex I parties. At this point, the climate regime displayed a relatively low degree of complexity, although, as discussed in the following

[674] Grubb, Laing, Counsell, and Willan 2011, 540.
[675] Bodansky 2005, 159.
[676] The Kyoto Protocol created the Clean Development Mechanism (CDM) and Joint Implementation (JI) mechanism. The CDM is discussed in more detail in the following section. JI allows for similar project-based exchanges between develop states with Protocol commitments. See Grubb et al. 2011. Pattberg and Stripple 2008 note that the CDM foreshadowed a turn in environmental policy-making toward market liberalism, flexibility, and pluralism, advocated by the United States.
[677] Sussman 2004, 363.

sections, this had already begun to change. Institutional integration was high, as the FCCC's Conference of Parties was the main decision-making body in the regime and most climate policies emerged form the UN system. The UN approach was "the only game in town."[678] The majority of actors supported the UN process; however, the FCCC had over fifty more state parties than the Protocol, so actor constellations were somewhat fragmented. Finally, there was little norm conflict within the regime at the time because the regime was young and climate policymaking was mostly concentrated within the UN system – there were simply not a significant number of norms, rules, and principles outside of the focal institution.

Institutional Benefits

The adoption of the Kyoto Protocol presented a significant evolution of the climate regime. Its binding targets and commitments created a new status quo that shaped important actors' future institutional choices. Groups of states that benefitted most from the adoption of the Protocol sought to limit institutional changes that undermined the focal institution. Institutional benefits were most distinct for developing countries, although the Protocol also entrenched the European Union's commitment to the status quo.

Of the conference negotiating blocs, developing countries were most pleased with the new state of the climate regime. Most importantly, they were able to achieve their primary goal of avoiding any commitments under the Kyoto Protocol. This put their economies at an advantage relative to industrialized state parties'. Additionally, the creation of the Clean Development Mechanism presented an opportunity for developing

[678] Karlsson-Vinkhuyze and Van Asselt 2009, 197.

countries to receive technology transfers. The CDM allows industrialized states to meet their emissions targets by investing in or financing projects in developing countries that reduce greenhouse gas emissions.[679] Between 2004 and 2012, the total investment in CDM projects was estimated at over $400 billion.[680] This is a significant sum, although, as will be discussed in more detail later, it has gone disproportionately to India and China, who have hosted nearly 70% of all projects.[681]

In addition to these financial incentives it brought, developing countries also receive more diffuse benefits from having the FCCC/Kyoto Protocol serve as the focal institution of the climate regime. Most developing countries operate under the collective banner of the global South in international environmental negotiations. The principal organ through which they negotiate within the UN system is the G77, an ad hoc but semi-permanent bloc that includes 132 members and China.[682] When the climate problem first emerged and was being primarily addressed in the more technical agencies like the WMO and the UNEP, developing countries advocated for the issue to be moved in the General Assembly.[683] Their focus on UN settings has remained,[684] with the G77 declaring:

> "The United Nations has always been at the center of the Sustainable Development debate, including its environmental protection pillar. This must be maintained. Climate Change should be pursued within the framework of the United Nations. It is important to emphasize that any special events or initiatives, whether individual, national, regional or multilateral should complement ongoing negotiations under the UNFCCC, which serve as the multilateral agreed structure within which the international community agreed to address the challenges of Climate Change."[685]

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[679] See Grubb et al. 2011.
[680] Edenhofer, Pichs-Madruga, and Sokona 2014, 1215.
[681] UNFCCC Statistics 2015.
[682] Najam 2005.
[683] Bodansky 1995.
[684] Kasa, Gullberg, and Heggelund 2008, 118; Zelli, Biermann, Pattberg, and van Asselt 2010, 31.
[685] Saleh Hayat 2007.

The insistence to preserve the United Nations as the focal institution for climate negotiations stems from a broader developing country strategy. The G77 formed in response to the first United Nations Conference on Trade and Development in 1964. Its initial focus was the creation of an alternative international economic order, particularly the establishment of a new international trade organization. Although unsuccessful on this front, developing states learned that they could use their strength in numbers and the majority voting system in the United Nations as a way to exert their influence. They carried this strategy over to the United Nations Conference on the Human Environment in 1972 and were successful in shaping the agenda of the conference.[686] Developing countries' success at obtaining financial and technological assistance in exchange for their participation in the Montreal Protocol further emboldened them to assert themselves in future environmental negotiations. During the Second World Climate Conference in 1990, they established themselves as equal partners in discussions for the first time during an international environmental conference.[687] They achieved another victory in the lead-up to the United Nations Conference on Environment and Development, successfully moving the drafting of the conference's enabling resolution to the United Nations Economic and Social Council, in which they historically had greater influence.[688] For these reasons, keeping the UN as the main forum for climate governance allows developing countries to most effectively exert their bargaining power.[689]

The European Union also viewed the adoption of the Kyoto Protocol as a positive evolution of the climate regime and, along with developing countries, became a status

[686] Williams 1993.
[687] Bodansky 1993, 470.
[688] Najam 2005, 311.
[689] Zelli et al. 2010, 31.

quo defender. The EU generally sought to address global environmental problems through multilateral cooperation and international organizations.[690] It has always advocated for a comprehensive, legally binding treaty negotiated at the multilateral level to respond to climate change.[691] There are a number of reasons for this. First, environmental protection has strong domestic support in most European countries.[692] Second, unlike the United States, the EU countries have been receptive to the findings of climate science, recognizing climate change as a real problem requiring serious action.[693] Third, the EU considers the response to climate change to be an important aspect of its international relations, as well as a source of soft power.[694]

Perhaps most importantly, the estimated compliance costs associated with the Kyoto Protocol were much lower for the EU than for the US.[695] Generally, while the US has emphasized the costs emissions reductions would impose on its economy, European states have focused on the economic costs of climate change itself. They have also embraced climate change mitigation as an economic opportunity, rather than a disadvantage.[696] This outlook is exemplified by a speech of the EU's Trade Commissioner, Peter Mandelson, in which he stated, "there is actually a potential competitive advantage in being a leader in adapting to climate change: in moving

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[690] Vogler 2005.
[691] Renard and Grevi 2012.
[692] Gratius and Gonzales 2012, 11. A recent study found that 65% of Americans are "worried" about climate change, as compared to 84% of Europeans – but only 43% of Americans are willing to sacrifice economically to slow global warming, as compared to 69% of Europeans. See Purvis and Stevenson 2010, 8.
[693] Vogler and Bretherton 2006.
[694] Lee 2012, 26; Oberthuer and Kelly 2008.
[695] Ibid. Achievement of the Kyoto GHG targets would require reducing emissions by 20% for the US, as opposed to 5% for the EU. The EU Commission estimated that the full achievement of its reduction target would cost the European economy less than 0.1% of its GDP.
[696] Paterson and Grubb 1992, 302. The UK, for example, commissioned the influential Stern Review on the Economics of Climate Change. The environment ministers of the UK, Germany, and France also published joint articles emphasizing the economic benefits of increasing the EU emission reduction target.

decisively in a direction the market is inevitably going to take, and getting ahead of the curve."[697]

For these reasons, the adoption of the Kyoto Protocol set in motion the development of the European Union Emissions Trading Scheme (ETS), a member-wide cap-and-trade system to limit GHG emissions. The European Commission proposed and justified the ETS as a mechanism that would allow members to meet their Protocol obligations.[698] After the ETS was launched on a trial basis, the timing of its obligations was set to be concurrent with the Protocol's first commitment period. The ETS rules allow European companies to meet a portion of their obligations through emissions credits they acquire through the CDM.[699] This helps explain why a majority of CDM projects have received funding from European states.[700]

In sum, the Kyoto Protocol created stakeholders in developing states as well as the European Union. For developing states, the treaty was beneficial because it allowed them to continue using the cheapest energy sources to fuel their economic growth while binding industrialized states to GHG reduction goals. This made developing country economies more competitive relative to their counterparts bound by obligations. Developing states also benefitted more generally from the structure of the climate regime, since it allows them to maximize their bargaining leverage in the United Nations system. The European Union had already been committed to addressing climate change at the regional level. The Kyoto Protocol institutionalized the EU's preferences globally and set in motion regional institutional changes that fully committed its members to greener

[697] Mandelson 2006.
[698] Ellerman and Buchner 2007, 66; Ellerman, Marcantonini, and Zaklan 2015, 5.
[699] Ellerman, Marcantonini, and Zaklan 2015, 3.
[700] UNFCCC Statistics 2015.

economic development. Widespread commitment to the Protocol had the potential to provide the Europeans with an economic edge.

Coalition of the Dissatisfied

At the Kyoto negotiations, the JUSCANZ countries argued for commitments so modest that they would allow them to increase emissions in practice. This group included Japan, the US, Australia, and Canada. Because it lacked any significant domestic sources of fossil fuels, Japan had for years pursued low emissions and saw any further reductions as prohibitively costly. Meanwhile, the US, Canada, and Australia were highly energy intensive and dependent on cheap fossil fuels.[701] The US and Australia did not ratify the agreement, while Canada and Japan did ratify but later withdrew from the treaty. These countries, citing the economic implications of the Kyoto Protocol, formed the core of the coalition of the dissatisfied.

Few governments showed as much displeasure with the UN climate institutions as the United States. Throughout the negotiations for the FCCC and Kyoto Protocol, there was a general hostility towards the climate regime within the US political system. Concerns about the economic implications of climate change mitigation were widespread among important political and economic actors. Opposition in the Senate to an agreement that did not require any action by developing countries was so great that President Clinton did not submit the Protocol for Congressional approval.

Hostility towards the climate regime in the US peaked after the 2000 election of George W. Bush. Two months into the beginning of his term, the United States issued "Kyoto's death warrant" by declaring it did not intend to implement the treaty and

[701] Andresen and Agrawala 2002, 47.

seeking to withdraw the US signature from the instrument.[702] The Bush administration followed its predecessors in emphasizing the economic consequences of the treaty. Its main concerns in the first half of 2001 were the slowdown of the US economy and energy security. President Bush explained his opposition to the Protocol in a letter addressed Senators on the grounds that it excluded developing countries, calling it “an unfair and ineffective means of addressing global climate change concerns.”[703]

During the Protocol’s negotiations, Australia supported the US in its calls for more modest targets than the ones proposed by the EU. Like the United States, Australia had ratified the FCCC but declined to join the Protocol, arguing that it would damage the country’s economy by putting it at a competitive disadvantage relative to developing states that were exempt from obligations. The Australian government was particularly concerned on the effect the treaty would have on its energy sector, which relied heavily on the production of coal.[704]

Overall, the coalition of the dissatisfied was small. Even if one were to add the OPEC states, for example, whose clear preference was for no climate regime at all, the total number would still be quite far from the three-fourths threshold. Yet it cannot be overlooked that the coalition included the world’s most powerful country. As discussed in chapter 2, more powerful states have greater institutional options available to them. They have the resources to create new institutions and to provide other states with incentives to join them. Additionally, they benefit from greater exit options. In all, powerful states have a higher capacity to change the institutional status quo and through their choices to generate greater complexity.

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[702] Borger 2001, 2.
[703] Bush 2001.
[704] Lawrence 2009, 284.

Intensity of Distributive Conflict

Climate change is a problem of exceptional magnitude. In addition to its ecological impact, it touches on nearly every aspect of national economies. Industry, energy, agriculture, and transportation are all affected by climate change as well as any mitigation efforts. Because of the problem's complex nature, the effects of the Protocol were difficult to estimate at the time of its adoption. Yet it is clear that the dissatisfied viewed it as imposing exorbitant costs on their economies. Thus, we can easily conclude that the intensity of distributive conflict within the climate regime was high.

Table 5.2 Carbon dioxide emissions and fossil fuel production, 2000

Country	**CO_2 emissions (metric tons per capita)**	**CO_2 emissions (kt)**	**Oil production (barrels per day in thousands)**	**Coal production (tons)**
Australia	7.8	62.1	828	338.1
Canada	17.4	534.48	2753	76.24
Japan	9.6	1219.45	112	3.27
USA	20.2	5701.83	9058	1073.61
Germany	10.1	829.98	93	226.05
France	6	364.06	135	3.82
UK	9.2	541.8	127	33.73
India	1.1	1187	773	370.02
China	2.7	3405.18	3378	1525.08

Sources: World Bank Development Indicators; US Energy Information Administration

One study estimated that the US would bear nearly two-thirds of the global cost associated with the treaty.[705] Another found that while GHG reductions would cost the US $100 per ton, the European cost was estimated at $5 per ton.[706] *Table 5.2* indicates that the stakes were indeed particularly high for the US when compared to the other JUSCANZ states, European countries bound by Kyoto, and China and India, the two largest developing country economic powers. In the year 2000, after the Protocol's adoption but before its entry into force, the US was first in absolute and per capita carbon dioxide emissions, oil production, and second only to India in coal production.

Australian Prime Minister John Howard also highlighted the economic costs of the Protocol when he declared his country's intention not to ratify the treaty. Howard saw Australia's natural competitive advantage as lying in the energy sector, on which it relied significantly for exports earnings. He also worried that accepting obligations would drive energy-intensive industries offshore to developing countries and would lead to job losses across the economy.[707] As *Table 5.2* indicates, Australia's production of fossil fuels was higher than European industrialized states'.

Institutional Inertia

There are three avenues for making changes to the FCCC framework: annexes, amendments, and protocols. Annexes to the FCCC are restricted to changes that are descriptive in nature and related to scientific, technical, procedural, or administrative matters. Annexes require the ratification of three-fourths of state parties to enter into

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[705] Nordhaus and Boyer 1999, 93.
[706] Mendelsohn 2005.
[707] Lawrence 2009, 284.

force and are binding to all parties, including those who have not ratified them.[708] Amendments also require the ratification of three-fourths of state parties to enter into force, but are only binding to those who have ratified them.[709] A three-fourths requirement constitutes a high degree of institutional inertia.

Because obtaining the necessary ratifications from such a large number of parties is difficult and slow, the FCCC can also be altered through the adoption of protocols. The FCCC itself does not specify voting procedures for protocols; it assigned this task to its first Conference of Parties. Yet the COP was unable to come to an agreement on the matter, so there are no formal rules in place that determine the procedures through which state parties can adopt protocols.[710] In the absence of voting rules, states adopted the customary rule that protocols must be adopted by consensus. In practice, this means that a small group or even a single party can prevent the adoption of a decision.[711] The advantage of protocols over amendments is that while the latter have high ratification requirements, the former can set their own requirements regarding entry into force.[712]

Table 5.3: UNFCCC ratifications, 1994-2016

Year	**Nr. of Parties**	**Three-fourths of parties**
1994	116	87
2000	185	139
2005	189	142
2010	194	146
2016	197	148

The formal and informal voting rules in the FCCC framework create high institutional inertia. Substantive changes require either an amendment or protocol, and

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708 Yamin and Depledge 2004, 549.
709 Ibid., 548.
710 Ibid. 432-433.
711 Ibid. 442.
712 Ibid. 550.

both of these present challenges. The amendment procedures create a large number of veto actors because they require ratification from three-fourths of parties for entry into force. Protocols create a large number of veto actors because the can only be adopted through unanimity. It has been difficult in the past for state parties to decide which of these options for institutional change is more tenable; thus, in the lead up to the conference in Kyoto, they had drawn up the protocol in the form of an amendment to the FCCC also.[713]

Expectations

Because the coalition of the dissatisfied is small but institutional inertia is high, it is unlikely that institutional change will take the form of nested layering. Rather, we can expect the dissatisfied to engage in forum shopping, which may lead to conversion. Additionally, the dissatisfied are also likely to seek to dismantle the status quo due to the high intensity of distributive conflict through institutional creation. The probability of displacement is high given that the coalition includes the US and other countries with the capacities to change the institutional landscape. As a result, the regime is likely to become more complex over time.

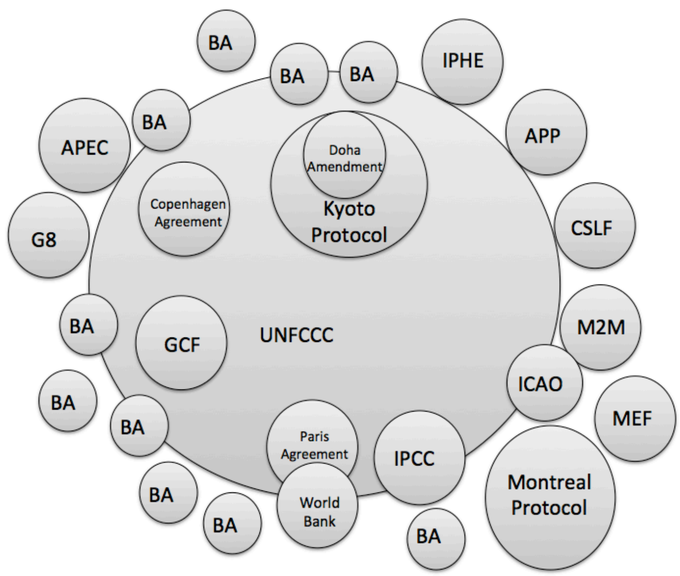
Forum Shopping and Conversion

The adoption of the Kyoto Protocol led many states to pursue forum-shopping opportunities. While the regime complexity literature tends to portray forum shopping as a strategy utilized by those who are dissatisfied with the status quo,[714] the picture that

[713] Ibid., 547.
[714] See Drezner 2013

emerges in climate change is more nuanced. Those opposed to the Protocol did seek venues outside the FCCC framework to affect the development of the regime, but the Protocol galvanized the status quo powers as well. These actors sough out different forums for the purpose of strengthening support for the current system. What is evident in the sections to follow is that states were often not successful in achieving significant,

Figure 5.3: Climate Regime, 2016



long-term changes through their activities. Attempts to place climate on the agenda of the World Trade Organization and UN Security Council, for example, were blocked and did not result in any changes to the regime. To the extent that institutions like the Asia Pacific Economic Cooperation and the G8 did embrace climate issues, it was through non-binding pledges that led to conversion, which created greater complexity only modestly through its effect on actor constellations. It had little effect on institutional integration and norm conflict.

Forum Shopping and Conversion by the Dissatisfied

Since the emergence of the climate issue, successive US presidents have declared that they preferred a climate regime based on flexibility mechanisms and market-based incentives, rather than globally imposed emissions targets.[715] The administration of George W. Bush was the first to take concrete steps outside of the FCCC framework to achieve this transformation. In his letter to US Senators discussed in the previous section, President Bush alluded to his administration's aims to establish a system that differs from Kyoto, stating he was "very optimistic that, with the proper focus and working with our friends and allies, we will be able to develop technologies, market incentives, and other creative ways to address global climate change."[716] At the first FCCC Conference of Parties following the 2001 US withdrawal from the Kyoto Protocol, US Undersecretary of State Paula Dobriansky reiterated that the treaty would be damaging to the US economy. She asserted that the US would adopt a leadership role in addressing the problem of climate change through a new multilateral, market-friendly approach.[717]

The Bush administration advocated for its new approach on the global stage at the 2002 UN World Summit for Sustainable Development, where its message was criticized by environmentalists[718] but lauded by conservatives.[719] Although more than one hundred heads of state were present, President Bush declined to attend. In general, the Americans argued against further attempts to address energy issues through a "top-down" hard law approach. Instead, they advocated for a decentralized strategy that included voluntary partnerships between governments in developing and developed countries, as well as

[715] See Blanchard 2007; Bodansky 2005; Gary and Rivkin 1991; McGee and Talkpin 2008.
[716] Bush 2001.
[717] McGee and Taplin 2008, 196.
[718] Prichett 2002.
[719] Glassman 2002.

public-private partnerships.[720] US efforts were largely seen as a success. While the WSSD resulted in more than 260 voluntary partnerships, there were no significant additions to treaty law on environmental cooperation.[721]

The Australian government of Prime Minister John Howard government shared the Bush administration's vision for climate governance and also attempted to shift policy focus towards more voluntary agreements outside the UNFCCC framework. Like the United States, Australia had ratified the FCCC but declined to join the Kyoto Protocol, arguing that it would damage the Australian economy by putting it at a competitive disadvantage relative to developing states that were exempt from Kyoto obligations.[722] Under Prime Minister John Howard, Australia attempted to shift climate change policy to the Asia-Pacific Economic Cooperation Forum. Its goal was to negotiate a long-term, non-binding emissions reduction target at a 2007 meeting. Australia was, however, opposed by China and other developing states, which were reluctant to discuss targets outside of the UN process.[723]

The meeting produced the "Sydney APEC Leaders Declaration on Climate Change, Energy Security and Clean Development," in which members committed to achieving "a common understanding on a long-term aspirational emission reduction goal to pave the way for an effective post-2012 international arrangement."[724] Although the

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[720] Steets 2004, 25 defines partnerships as "voluntary cooperative agreements between actors from the public, business and civil society that display a minimal degree of institutionalization, have common, non-hierarchical decisionmaking structures and address public policy issues."
[721] McGee and Taplin 2008, 201. For a discussion on the thousands of climate partnership networks have emerged since the WSSD, see Backstrand 2008.
[722] Lawrence 2009, 284.
[723] McGee and Taplin 2009, 224.
[724] Asia Pacific Economic Cooperation 2007.

Declaration highlights members' commitment to the FCCC several times,[725] McGee and Taplin note that its features are more similar to alternative vision espoused by the Americans. The Declaration shifts the focus of cooperation on climate policy toward voluntary commitments for research, information sharing, and clean technology development.[726] One could argue that the Declaration introduces greater norm conflict into the regime; however, it is difficult to gauge the extent to which the pledge had any effect. Since then, APEC has reasserted its intent to reduce greenhouse gas emissions by supporting development and information sharing of efficient energy technologies.[727]

Prime Minister Howard expressed his desire for APEC to become another alternative to the UN regime,[728] thus indicating a preference for displacement; however, Australia ran into opposition from developing status quo powers. This finding further builds on the evidence discussed in the preceding chapters about the challenges the agents of change face when attempting to alter the institutional status quo. Despite its intentions, Australia's forum shopping merely resulted in the conversion of APEC: while government succeeded in redirecting the economic organization towards cooperation on climate change through a soft law, "aspirational" commitment, APEC's impact on the climate regime has been minimal.

Forum Shopping and Conversion by the Status Quo Defenders

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[725] The Declaration states that members "reaffirm [their] commitments to the … UNFCCC" and that "APEC economies that are Parties to the UNFCCC agree to work actively and constructively toward a comprehensive post-2012 arrangement at this year's UNFCCC Conference of the Parties." See Asia Pacific Economic Cooperation 2007.
[726] McGee and Taplin 2009.
[727] Asia-Pacific Economic Cooperation 2013.
[728] McGee and Taplin 2009, 223.

The European Union ratified the Kyoto Protocol in 2002 and in the years since, the institution and individual member states have implemented regional and domestic policies to meet their Kyoto targets. To maximize the environmental and economic gains of their efforts, the Europeans worked to get reluctant states such as Canada, Australia, and Russia to ratify the Protocol. They also aimed to reengage the US in climate negotiations, both because US was, until recently, the world's biggest emitter of greenhouse gases and because major developing country emitters would not agree to future commitments as long as the US remained outside of the Protocol.[729] The EU has had to try to find the balance between engaging the US while taking into account the interests of developing states under the UN framework.[730] To achieve their goals, the EU and its member states pursued their agenda to a number of forums outside of the UN climate framework. At the World Trade Organization and UN Security Council, the Europeans' forum shopping activities failed to produce any impact due to opposition of other states. They were slightly more successful at the G8, which has continued to engage with climate issues in a limited fashion as a result of conversion.

The EU has attempted to bring discussions on environmental law to the World Trade Organization (WTO) since the 1990s, proposing that some environmental treaty rules be granted a waiver with respect to the principles of non-discrimination. It stepped up its efforts leading up to the Doha trade round, demanding a mandate for the clarification of the relationship between the WTO and multilateral environmental treaties. The European Parliament has continued this pressure. It has commissioned a study to examine how trade policy could contribute to combating climate change. This study

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[729] Alfionis 2008.
[730] van Asselt 2007.

discusses opportunities for altering WTO rules so as to employ climate-related measures in the institution.[731] The Parliament has asked the Commission to take initiatives within the WTO to ensure that trade policy takes into account its potential impact on climate change.[732] The EU Trade Commissioner, for his part, has acknowledged that the most important way of achieving climate-conscious "green trade" is through the WTO.[733]

The EU's efforts to discuss climate in the WTO are based on clear distributive considerations. The fear is that European goods could be made less competitive by the EU's climate policies relative to goods of states that have not accepted emissions reductions targets or implemented strong domestic climate policies.[734] Engaging the WTO is a way to mitigate this potential disadvantage. However, the EU has faced resistance from the US, Australia, and most developing states. The latter have been particularly opposed to any discussion of the UN climate regime under the WTO umbrella[735] where, historically, the US and EU have dominated outcomes.[736] As a result, these forum-shopping efforts have not affected any change in the climate regime. Undeterred, the EU countries have continued their efforts elsewhere.

Under Prime Minister Tony Blair, the UK has been particularly active in attempting to reengage the US and expanding the scope of the climate issue. In 2007, the UK initiated a debate on the relationship between climate change and international security at the UN Security Council. Its goal was to raise awareness for the problem. The UK's initiative was supported by those favoring strong action in response to climate

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[731] See Kraemer, Hinterberger and Tarasofsky 2007.
[732] European Parliament 2007.
[733] Mandelson 2006.
[734] Meltzer 2012 uses the example of the EU's Aviation Directive to show the steps the Union is taking to address issues of competiveness and carbon leakage.
[735] Zelli and van Asselt 2010, 88.
[736] See Steinberg 2002.

change, including European states, small island states, and some developing states most affected by the problem. The consensus among these actors was that dealing with climate change should be viewed as part of conflict prevention. However, many leading developing states, particularly the BASIC group, were opposed to keeping climate change on the UNSC agenda.[737] The G77 also voiced its opposition to the move, noting that the Security Council was encroaching on the responsibilities of the General Assembly, Economic and Social Council, and in the particular case of climate change, the UNFCCC.[738] This is not surprising, since institutional power in the Security Council favors the great powers, while the G77 have much greater influence in the UN bodies.

The UK has also shifted climate discussions to other forums, seeing its presidencies of both the EU and G8 in 2005 as a unique opportunity. While making it explicit that it did not intend to bypass the UN negotiating process, the UK launched the Gleneagles Dialogue on Climate Change, Clean Energy and Sustainable Development.[739] Although it was presented as a complementary process to UN negotiations, the resulting Communiqué was more in line with the goals the US had been pursuing rather than those of the FCCC; it contains nothing the US had not agreed to in the past.[740] Still, while the US once again refused to accept a binding agreement when pressed by Germany at the 2007 G8 meeting in Heiligendamm,[741] its stance softened at subsequent meetings under the Bush as well as Obama administrations. In these, the G8 called for a 50% global

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[737] Sindico 2007.
[738] Amil 2007.
[739] The other leading laggard besides the US, Australia, also participated, as did major GHG emitting developing states such as China, India, Brazil, and South Africa.
[740] Leaders did not agree to any new targets but did emphasize technology cooperation. At a later G8 meeting, Germany pressed the US on accepting targets and timetables, with no success. See Alfonis 2008.
[741] Alfionis 2008. Germany also made climate change a top priority during its presidencies of the EU and G8. See Nhamo 2008.

greenhouse gas reduction by 2050, with an 80% cut by industrialized states.[742] The G8 has also entered into the technology transfer business, launching the International Program for Energy Efficiency and Cooperation in 2008 with India, China, and South Korea to exchange energy efficiency best practices.[743] The adoption of non-binding goals and creation of a new program – both reminiscent of the initiatives having taken place in APEC – are indicative of the conversion process in the G8. Still, its loosely institutionalized structure has made it difficult for supporters of the FCCC process to keep climate change on its agenda. After taking over the G8's presidency in 2013, David Cameron, Tony Blair's successor to the UK's prime ministership, rebuffed French and German attempts to embrace climate change as part of the G8's main agenda.[744]

Overall, these sections demonstrate that states engage in forum shopping for a variety of reasons. The Americans and Australians hoped to introduce norm conflict and to displace the existing regime. The Europeans, on the other hand, sought to produce complementary norms that would strengthen the FCCC process. Neither of the parties was particularly successful: forum shopping failed to produce any changes at the WTO and UNSC and resulted merely in conversion at APEC and the G8. Although both of these institutions have over time engaged in climate-related policy discussions, their role in and impact on the regime, including its complexity, has been minor.

Overlapping Layering

In addition to forum shopping, the adoption of the Kyoto Protocol also triggered institutional proliferation. The aim of states creating new institutions in these cases was

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[742] G8 2008.
[743] Michonski and Levi 2010.
[744] King 2013.

not to establish an alternative to the FCCC and Kyoto. Rather, they sought to ensure support for the FCCC process and strengthen their bargaining position within it. This indicates that actors who are relatively satisfied with the institutional benefits of the status quo also utilize proliferation as a strategy, a finding not predicted in this chapter's expectations. States use it both to counter others' attempts to displace the focal institution as well as to obtain distributive advantages within it. This strategy results in overlapping layering, since the intent is to alter the status quo without replacing it. The proliferation efforts discussed below have contributed to greater complexity in the climate regime. First, they have fragmented actor constellations because they include states that are not parties to the Kyoto Protocol. Second, they have affected institutional integration due to creating climate policies outside of the FCCC framework. It is not clear that the creation of these institutions introduced significant norm conflict.

The European Union has turned to bilateral partnerships with important emitters as a way to supplement its multilateral approach and move post-Kyoto negotiations forward.[745] Part of this strategy was motivated by a desire to reengage the US in climate issues. Climate change meetings between the EU and US began in 2002. While emphasizing a commitment to advancing the goals of the FCCC, a Bush administration official identified technological cooperation and market-based incentives as the main specific areas for cooperation in US-EU talks.[746] Thus, this partnership went along on two separate tracks. On one end, the US and EU held a number of Joint Meetings on Climate Change Science and Technology Research that elaborated on specific topics for cooperation such as carbon capture and storage, carbon cycle research, and aerosol-

[745] Renard and Grevi 2012.
[746] Boucher 2002.

climate interactions, but did not mention the FCCC.[747] On the other end, a High-Level Dialogue on Climate Change, Clean Energy and Sustainable Development was launched in 2006. It was aimed at advancing the G8 Gleneagles initiative in a way that was "guided by the ultimate objective of the [UNFCCC]."[748] Although the communiqués mostly focus on promoting clean technologies,[749] the parties also commit to developing a post-2012 climate regime under the FCCC.[750]

The EU has also initiated climate change partnerships or dialogues with large developing country emitters, including China in 2005, South Africa in 2006, India in 2008, and Brazil in 2011.[751] Additionally, it has increasingly turned to including climate issues in its trade agreements. It is clear that the goal has been to strengthen, rather than subvert, the FCCC process. In laying out its support for a binding agreement to emerge from the 2009 COP meeting in Copenhagen, the European Commission noted "bilateral contacts within the UNFCCC process […] and bilateral discussions between the EU and key third countries should explore concrete contributions to the Copenhagen agreement."[752] Following what the EU viewed as a disappointing outcome at the conference, the chair of the European Parliament's environment committee predicted that the EU would further pursue bilateral agreements as a way to fulfill their climate funding commitments to developing states.[753]

The EU and US have both actively pursued rising developing country powers, seeing their cooperation as vital to the structuring of climate governance; these countries

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[747] Department of State 2003.
[748] Bureau of Oceans and International Environmental and Scientific Affairs 2006.
[749] Office of White House Press Secretary 2007.
[750] Bureau of Oceans and International Environmental and Scientific Affairs 2008.
[751] Renard and Grevi 2012.
[752] Commission of the European Communities 2009.
[753] "Bilateral Deals" 2010.

have embraced the opportunity to engage in newly created institutions. States like China and India have continuously voiced their support for the FCCC process. They have been active in negotiations and assumed leadership roles in the G77. China and India's interest in promoting the FCCC process stems mainly from two sources. First, they have both relentlessly emphasized the need for industrialized states to take primary responsibility for climate change mitigation by accepting binding targets. At the same time, they have argued that developing states should be able to avoid such obligations in order to pursue economic development. Having achieved this distinction in the Kyoto Protocol, they have not been willing to give it up.[754] Second, both China and India have benefited economically from the Protocol by the hosting the highest and second-highest number Clean Development Mechanism projects, respectively.[755]

Yet while supportive of the FCCC process, the most economically successful developing states are less dependent on G77 membership and UN assistance in general. Thus, they have been able to pursue institutional avenues outside of the UN. While continuing to express commitment to the FCCC framework, they have increasingly embraced more newly created agreements initiated by industrialized states,[756] as well as initiated some of their own. China is a prominent example. The years since the climate issue first became one of international concern have seen China evolve in its standing in the international system as well as in its approach to climate change. Climate change did not gain political salience in China until the late 1990s, and it has only become a priority in more recent years.[757] Today, it is making one of the world's biggest efforts to reduce

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[754] Haggelund and Buan 2009; Michaelowa and Michaelowa 2012.
[755] CDM Insights 2013.
[756] Kasa et al. 2008.
[757] Haggelund and Buan 2009.

its greenhouse emissions by developing and implementing more energy efficient technology.[758] Still, despite its active domestic policy, China has consistently resisted any binding commitments under the FCCC.

To increase its access to clean technology and avoid rigid international commitments, China has pursued a two-pronged strategy. To achieve the former, it has joined many of the new arrangements created outside of the FCCC process, the majority of which have been initiated by industrialized states.[759] China has entered into bilateral agreements on climate change with, among others, the United States, European Union, Japan, United Kingdom, and Australia.[760] Additionally, it has assumed membership in most smaller multilateral climate institutions,[761] which will be discussed in the following section. The primary reason for China's participation in the new institutions is that, along with the rest of the developing world, it has demanded financial assistance and technology transfer but has felt that the UN process has failed to deliver on this issue.[762] It has seen the new institutions as an opportunity to achieve this goal.[763] Entering into these agreements presents a win-win opportunity for China because even if participation does not significantly further the country's goals, it loses little in the process. This strategy has paid off in some cases. Many of the clean energy initiatives launched as part

[758] Victor 2011, 14.
[759] Ibid., 121.
[760] National Development and Reform Commission 2012.
[761] For example, China is a member of the Asia Pacific Partnership for Clean Energy and Climate (APP), International Partnership for Hydrogen Economy, Carbon Sequestration Leadership Forum, and Asia-Pacific Partnership for Clean Energy and Climate. China has also participated in G8+ discussions on climate change.
[762] Haggelund and Buan 2009.
[763] This is evident in China's country statement on the APP, for example. It points to a lack of funding and technologies as a barrier to its participation in the APP and asks that a financial mechanism be developed to remedy the issue. See Gao 2008.

of the EU-China Partnership on Climate Change, for example, received substantial financial contributions from the EU.[764]

The Chinese government has gone beyond simply signing on to new agreements created by other states. It has also initiated its own bilateral deals. In 2012, it signed Memoranda of Understanding on Providing Foreign Aid to Address Climate Change with Ethiopia, Grenada, Nigeria, Madagascar, and Benin.[765] Although its motivations are not entirely clear, these new initiatives may have been launched to support its other goal, which is maintaining its distinction as an Annex II party. China has continued to insist that the UN process is the most legitimate forum for global climate change and assumed a leadership role in the G77, maintaining the position that industrialized states should take primary responsibility in addressing the problem.[766] This has helped reduce the likelihood of other developing countries defecting from the G77 position by accepting concrete commitments under the FCCC.[767] Perhaps its support of the aforementioned LDCs, as well as its claim that it has helped African countries and small developing island states adapt to climate change,[768] is intended to ensure those states' loyalty in the FCCC negating process. A 2009 China-India bilateral climate deal further supports this view. The agreement, set up to further cooperation on reducing greenhouse gas emissions, also includes setting up a joint working group to coordinate policies in the global climate talks; in other words, it is meant to strengthen their common front in UN negotiations.[769]

[764] Lee 2012, 24.
[765] National Development and Reform Commission 2012.
[766] National Development Reform Commission 2012.
[767] Haggelund and Buan 2009.
[768] Information Office of the State Council of the People's Republic of China 2008.
[769] EurActiv 2010.

This discussion shows that states' institutional choices can indeed be limited by their position in the international system. There is a clear distinction between the actions of least developed states and rising developing powers. Both have the same goals: to maintain Annex II status and obtain financial and technical assistance. However, rising developing powers have greater options available in regards to joining newly created institutions and can also draw on their status and resources to entice others into bilateral arrangements to achieve their goals. Thus, as distributive approach indicates, powerful states have more freedom to proliferate. It is also evident that in this case, states utilize the strategy of institutional proliferation to increase their bargaining leverage within the focal regime, rather than to create an alternative to it. Nonetheless, the resulting process of overlapping layering generates some complexity. Although there is no indication that these institutions introduced normative conflict into the regime, they have affected institutional integration by pulling climate-related policymaking away from the FCCC process. Actor constellations have also become more fragmented as countries have signed on to institutions outside of the UN regime, some of which include states not party to the Kyoto Protocol.

Displacement

The ascendance of the George W. Bush presidency marked the start of a concerted US effort to transform the climate regime through a displacement of the Kyoto Protocol. The preference, as it was with past US presidents, was for a bottom-up system that utilized flexible, voluntary goals and market mechanisms rather than controls imposed form the top down. To achieve this transformation, the administration engaged in institutional proliferation, creating a series of bilateral and small multilateral institutions that promoted its preferences. The Obama administration, although not overtly hostile towards the climate regime, continued with the same strategy. While other factors have contributed to the evolution of the regime, the US appears to have succeeded. The Kyoto Protocol at this point has been effectively abandoned. The resulting process of displacement has generated significant complexity through lowering institutional integration via new decision-making processes outside of the UN; fragmenting actor constellations by engaging various sets of actors across institutions, some of which are not party to the Kyoto Protocol; and introducing norm conflict through institutions that advocate for non-binding flexible approaches to emissions reductions.

Hints of the alternative American approach emerged in the White House Global Climate Change Policy Book in 2002, which announced joint climate change research ventures with Japan, Italy, and countries in Central America. This marked the beginning of the US establishment of bilateral and small multilateral climate agreements; by 2006, the Bush administration had created such agreements with fifteen states and regional organizations, seeking cooperation and resource pooling for climate-change-related research, voluntarist domestic climate change policy, and technological development.[770] Many of the new multilateral institutions were initiated around the time the Kyoto Protocol entered into force: the International Partnership for Hydrogen Economy (IPHE)[771] and the Carbon Sequestration Leadership Forum (CSLF) in 2003;[772] the

[770] The US partnered with Australia, Brazil, Canada, China, Central America, the European Union, Germany, India, Italy, Japan, Mexico, New Zealand, South Korea, Russia, and South Africa. See McGee and Taplin 2008.

[771] The US Secretary of Energy first called for international cooperation on research and development to support the deployment of hydrogen energy technologies at an International Energy Agency meeting in April 2003. The initiative was officially announced after an agreement reached at a US-EU summit within two months. Seventeen nations and the European Union are currently part of the IPHE. See Cole 2003.

Methane to Markets Partnership (M2M) in 2004;[773] the Asia-Pacific Partnership for Clean Energy and Climate (APP) in 2005; and the Major Emitters/Economies Forum on Energy Security and Climate Change (MEF) in 2007.[774] Of these US initiatives, the APP has received the most scrutiny. A closer look at the APP also highlights some of the institutional features shared by these initiatives.

The APP built on bilateral climate relationships that had already been established by the United States in 2002.[775] The initiative was not strictly a climate change agreement; it was directed towards the development and deployment of clean energy technologies that would address members' energy needs, as well as the "associated challenge" of reducing greenhouse gas emissions.[776] The APP presented a hybrid form of governance, which relied on public research bodies and heavily engaged the private sector as an "integral part of the cooperative activities."[777] Unlike the Kyoto Protocol, the APP never issued any targets or timetables for reducing emissions, for which it was heavily criticized.[778] IPHE, CSLF, M2M, and MEF all share a number of key characteristics with the APP: they are not legally binding, forego time-tables and targets, do not differentiate between industrialized and developing countries, and primarily

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[772] The ICSLF was established as a collaborative network to advance research, development, and commercial deployment of carbon capture and storage technologies. See Bush 2003. It currently has twenty-three state partners and the European Union.

[773] The M2M seeks to reduce global emissions of methane. It has since been renamed the Global Methane Initiative and currently has forty-one partner states.

[774] The MEF consists of the seventeen states that emit the greatest amount of greenhouse gases.

[775] The founding APP membership included the United States, China, India, Japan, and South Korea. Canada joined two months later.

[776] This wording helped placate climate-skeptics in the American legislature. It allowed Senators likes James Inhofe to praise the APP in the same statement in which he referred to global warming as a hoax. See U.S. 2006.

[777] Asia Pacific Partnership on Clean Development and Climate Charter 2005. This echoes the United States' promotion of public-private partnerships at the 2002 WSSD.

[778] See Flannery 2006.

emphasize technological cooperation as a solution to climate change.[779] They present a change from the features of the UN regime, offering an alternative path for international climate governance.[780]

In short, these institutions reflect US preferences and mark a departure from some of the key characteristics of the UN framework and as a result, introduced normative conflict into the regime. Still, it is important to point out that even whilst attempting to create an alternative form of climate governance, the Bush administration was constrained by the UN process and had to make it explicit it was not attempting to undermine it. The APP's non-legally binding charter asserts that it is consistent with the principles of the FCCC and is intended to complement the Kyoto Protocol. Further, the aforementioned institutions include a number of states that are strong supporters of the UN framework. If these agreements were indeed a threat to that goal, it is not likely they would have joined them. Australia followed the United States in forming a number of non-binding bilateral climate change partnerships for joint research and technological development. It was also a key partner to the United States in establishing the APP. Statements by government officials indicated that Australia and the US wanted the APP and technology partnerships in general to serve as replacements for the Kyoto Protocol.[781]

The administration of George W. Bush and Australia's Howard government both declined to participate in the Kyoto Protocol, primarily for economic reasons. The Bush administration, in particular, was perceived as disengaged with the UN process. In creating new international institutions on climate change, these governments attempted to

[779] van Asselt 2007, 19.
[780] McGee and Taplin 2009, 228.
[781] Lawrence 2009, 286.

produce an alternative to the existing climate regime. This alternative would be based on voluntary emissions commitments and would primarily rely on public-private partnerships and the development of clean technologies to tackle the climate challenge. It would distribute the costs and benefits of climate change mitigation differently by allowing large emitters like the US to avoid mandatory emissions reductions and achieving greater participation by developing countries. The following section will turn back to the UN process, which has abandoned the Kyoto Protocol and the embraced institutional features advocated by the Americans.

The Potential for Nested Layering

Attention focused once again on the FCCC process as the 2012 expiration of the first round of commitments under the Kyoto Protocol neared. Leading up to the 2009 COP in Copenhagen that was supposed to end in the adoption of a new agreement, the negotiating positions of key actors did not significantly differ form those they had expressed during the formation of the climate regime. The G77 sought an indefinite extension of the Kyoto Protocol that would include a new commitment period and emissions targets for industrialized states.[782] The EU wanted to achieve a binding agreement with ambitious emissions reductions targets that extended to developing countries. The US continued to promote a bottom-up approach that allowed countries to set their own targets.[783] The American approach prevailed. A reauthorization of the Kyoto Protocol has not been successful. Instead, the COP adopted the 2015 Paris Agreement that, although not yet in force, reflects the institutional preferences of the US.

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[782] International Institute for Sustainable Development 2009, 28.
[783] International Institute for Sustainable Development 2009, 29.

The displacement strategies pursued by the US and subsequent institutional proliferation initiated by the Obama administration influenced this outcome. While it is still early for a full assessment, it is possible that the adoption of the Paris Agreement will reverse some of the complexity within the climate regime by reintegrating actor constellations and institutional decision-making as well as reducing normative conflict.

The election of Barack Obama marked a change in American domestic climate policies as well a shift in the country's multilateral engagement. While President Bush did not for some years acknowledge the risks of climate change, his successor viewed it as a serious, urgent, and growing threat.[784] Obama has supported a number of domestic initiatives, including cap-and-trade legislation, to deal with the problem. Internationally, the policy goals remained generally consistent between administrations. The Obama administration opposed the Kyoto Protocol like its predecessors had[785] and pushed for a bottom-up approach that would allow countries to set their own targets.[786] Yet in an important shift, it re-engaged with the UN process in hopes of reaching a new, non-binding global agreement to follow the Protocol's first commitment period.[787] To achieve this goal and secure the participation of developing countries,[788] the US pursued bilateral agreements with important players like Mexico,[789] Russia,[790] Brazil,[791] Canada,[792] India,

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[784] Obama 2009a.
[785] Vidal 2009.
[786] International Institute for Sustainable Development 2009, 29.
[787] Jonathan Pershing, the chief US negotiator at the COP in September 2009, stated "There has been a startling change in the US position. There is now engagement. We have had a 10-fold increase finance from the US. We have put $80 billion into a green economic stimulus package. One year ago there was no commitment to a global agreement." See Vidal 2009.
[788] Purvis and Stevenson 2010, 6.
[789] US-Mexico Bilateral Framework on Climate Change 2009.
[790] US-Russia Energy and Energy Efficiency Cooperation 2012.
[791] US-Brazil Strategic Energy Dialogue 2012.
[792] US-Canada Clean Energy Dialogue 2009.

and China.[793] The expectation was that interactions at the bilateral level would increase the likelihood of successful negotiations at Copenhagen.[794] The Obama administration also launched the Energy and Climate Partnership of the Americas (ECPA), a multilateral institution reminiscent of those endorsed by the Bush administration. ECPA encourages governments and private industry to collaborate on the development of clean technologies without pursuing any concrete targets for limiting emissions.[795] In effect, the new US approach sought, through proliferation, to re-center the regime around the FCCC while also displacing its core norms.

As Copenhagen neared, preliminary negotiating sessions failed to make progress. It became clear that the ambitious goals UNFCCC Executive Secretary Yvo de Boer had identified, including emissions reductions by industrialized states, were likely out of reach.[796] The Copenhagen Agreement that emerged is a non-binding instrument that most closely approximates the United States' preferences. The conference itself was paralyzed by conflict. At one point, the G77 and China engaged in what observers described as a "walk-out" over a perceived inadequate focus on new targets for Annex I parties.[797] Negotiations became so unwieldy that the Copenhagen Agreement was negotiated by only a small number of parties that included the United States and the BASIC group. This prompted complaints by some developing states that the process had been "untransparent and undemocratic."[798] Due to this controversy, delegates did not express the unanimous consensus necessary to formally adopt the agreement. Instead, the COP "took note" of

[793] Goldenberg and Watts 2009.
[794] Goldenberg and Watts 2009.
[795] See Energy and Climate Partnership of the Americas 2013.
[796] International Institute for Sustainable Development 2009, 27.
[797] International Institute for Sustainable Development 2009, 28.
[798] International Institute for Sustainable Development 2009, 28.

the deal and the conference ended in disarray. While the events at Copenhagen have widely been considered a failure, the conference serves as an important turning point for the regime. It marked both the United States' reengagement with the FCCC process as well as the regime's reorientation towards a bottom-up approach.

At the following year's Conference of Parties, some delegates suspected that there was a "real and concrete risk" of the FCCC process unraveling. Therefore, the main goal became bringing the terms of the Copenhagen deal formally under the FCCC regime.[799] This development speaks to the stickiness of large, multilateral international institutions. The FCCC framework, in its near two decades of existence, had produced few tangible material benefits. The main exception is the CDM, but the majority of this resource has gone to only two countries. Perhaps it would have been more efficient to completely abandon the FCCC process and start anew, yet this option was never considered. This indicates that states place significant value onto their past investments, even if those are not clearly successful. Many delegates expressed fear that "institutions, common accounting rules and flexibility mechanisms" of Kyoto would collapse.[800]

The Conference of Parties was eventually able to come to an agreement regarding the evolution of the regime. A number of states, including Japan, Canada, and Russia, declared their intention not to continue on with any additional Kyoto commitments. These countries, which had been dissatisfied with the treaty since its inception, effectively defected. As a result, by 2012, the parties covered by the Protocol accounted for only 15% of global GHG emissions.[801] Yet developing countries, including the BASIC group, continued to insist on a new commitment period. The EU, AOSIS, and a

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[799] International Institute for Sustainable Development 2010b, 28.
[800] International Institute for Sustainable Development 2012c, 26.
[801] International Institute for Sustainable Development 2012c, 26.

group of LDCs, for whom a strong global regime was a priority, struck a deal with the BASIC group: in exchange for accepting a second commitment period, BASIC would agree to launch negotiations for “a protocol, another legal instruments or an agreed outcome with legal force under the Convention applicable to all parties.”[802]

The 2012 COP adopted the Doha Amendment to the Kyoto Protocol, which sets another round of binding emissions reductions targets for industrialized countries to be achieved between 2013 and 2020. Developing countries succeeded in obtaining another commitment period, but institutional inertia has presented a problem for them: the Protocol stipulates that an amendment must be approved by three-fourths of its state parties to enter into force; this is an extremely high hurdle because it requires the Doha Amendment achieve 144 ratifications. Thus far, the amendment has achieved 59 ratifications, five from industrialized states.[803] This presents another example of those resisting institutional changes simply opting against ratifying agreements. Although no official decision to discontinue the Protocol has been made, it most of the international community has accepted its fate.[804]

In the meantime, the US continued to use newer bilateral and multilateral forums to promote the agenda it hoped to achieve within the FCCC. For example, the Obama administration turned to the MEF. The Bush administration claimed one of its reasons for creating the institution was to contribute to the FCCC process;[805] however, a close look at MEF meetings, documents, and statements of Bush administration officials reveals that the MEF never seriously took up the issues of the UN framework. Through the MEF, the

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[802] FCCC/CP/2011/9/Add.1; International Institute for Sustainable Development 2011b, 30.
[803] See United Nations Treaty Collection
[804] Bodansky 2015.
[805] White House 2007.

Bush administration simply continued to call for a bottom-up international climate policy involving public-private partnerships for technological development, as well as nationally determined reductions commitments.[806] President Obama sought to achieve the same goals by integrating them into the FCCC framework. He used the MEF as a platform to reaffirm his support for the FCCC process,[807] hoping to use the forum to create momentum for an agreement at Copenhagen.[808] Following the conference's limited success, he proposed broadening the MEF to include other LDCs, who had hindered an agreement at Copenhagen, so as to enhance the representativeness and legitimacy of the institution.[809] The administration's bilateral engagement with China is also credited for helping achieve the Paris Agreement.

Familiar fault lines emerged at the 2015 Paris COP. The EU wanted a legally binding agreement while the US did not. They shared the goal of getting developing states to contribute to emissions reductions. For their part, developing countries again stated economic development to be their priority and sought financial aid for climate change mitigation and adaptation.[810] The Paris Agreement reflects the bottom-up approach to climate governance that the United States has long advocated for. The central provisions of the agreement require state parties to submit a nationally determined contribution (NDC) to the FCCC secretariat every five years. The communication of the NDCs is itself legally binding but their actual substance, including any emissions reductions targets, is not. The agreement does not distinguish between developing and

[806] McGee and Taplin 2009.
[807] Obama 2009b.
[808] International Institute for Sustainable Development 2009, 27; Talley 2009.
[809] "Climate Change" 2010.
[810] International Institute for Sustainable Development 2015.

industrialized regarding the obligation to submit NDCs.[811] Most of the Paris Agreement's provisions are a reflection of those found in the Copenhagen Accord,[812] which was brokered by the United States.

175 countries signed the Paris Agreement on the day it opened for signature in April 2016. Its entry into force requires the ratification of 55 states representing at least 55% of global greenhouse gas emissions. While it may be premature, one can speculate on its effect on the wider regime. It is possible that if adopted, the Paris Agreement will rein in some of the complexity of the regime for a number of reasons. First, the agreement seems to have wide support, including of states not party to the Kyoto Protocol. Its adoption therefore could signal greater integration of actor constellations. Second, by definitively placing the FCCC framework back at the center of global climate process, it could signal greater institutional integration. Although the agreement sets out the creation of a number of new bodies, all of these will be integrated into the FCCC framework. The International Institute for Sustainable Development has proclaimed that with the Paris Agreement, "the FCCC repositions itself as a hub for global climate action."[813]

While the FCCC has survived, the small multilateral forums created by the Bush administration do not appear as durable. The Asia Pacific Partnership, the marquee institution that garnered much attention in the 2000s, has been disbanded. The APP's fate stands in sharp contrast to the durability of the FCCC. The Major Emitters/Economies Forum does not appear to have anything scheduled for 2016. Finally, because the Kyoto Protocol is effectively dead, and since the Paris Agreement is consistent with the norms

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[811] International Institute for Sustainable Development 2015, 43.
[812] Bodansky 2015.
[813] International Institute for Sustainable Development 2015, 45.

promulgated via the United States' proliferation strategy, its adoption may lower norm conflict. To reiterate, it is still quite early to examine how the agreement affects the wider regime, but it is possible that it lowers, or at least stabilizes complexity. The expectations outlined in this chapter did not foresee this development.

Conclusion

In comparison to the ozone and fisheries regimes, the global climate regime has undergone the most profound transformation. In its first decade of existence, it presented as a coherent traditional regime centered around the UN Framework Convention on Climate Change. Yet around the time the Kyoto Protocol entered into force, climate governance began to fragment. This development is consistent with the expectations derived from the theoretical model presented in this dissertation. The ways in which the focal institution distributed the costs and benefits of cooperation left a small but powerful group of states dissatisfied. The United States was the most notable actor in this group. Because the intensity of distributive conflict associated with climate change is high, the dissatisfied perceived the status quo as imposing a significant burden on their economies. As the inertia of the focal institution is high, creating a large number of veto players, the dissatisfied could not achieve change from within. In their attempt to undermine the existing system, they engaged in forum shopping and institutional proliferation, which resulted in conversion and displacement. These processes lowered institutional integration, fragmented actor constellations, and introduced norm conflict, making the climate regime more complex over time.

While providing support for the expectations of conversion and displacement, this case study also yields two unexpected findings. First, parties that benefited from the institutional status quo utilized strategies usually associated with those who want to upend it: they also engaged in forum shopping and institutional proliferation. The resulting processes of conversion and overlapping layering contributed modestly towards greater complexity by fragmenting actor constellations. Although the status quo powers utilized the same means as the dissatisfied, they directed them towards different ends. Their aim was to shore up support for the focal institution while also enhancing their bargaining position within it. Counter-intuitively, states pursue modest institutional changes outside of focal institutions to strengthen their position and ensure broader regime stability.

Second, after a decade of fragmentation, efforts state parties to the FCCC have recently undertaken appear poised to re-center the regime around the focal institution. This is a surprising development because the distributive-historical model predicts that climate change is the kind of issue that is most likely to yield greater complexity. Chapter 2 outlines the importance of the intensity of distributive conflict to institutional choices and regime development. It argues that in the presence of high distributive conflict, actors bargain harder and agreement among them is difficult to achieve. Therefore, we should always observe greater complexity where the stakes of distributive conflict are high because the dissatisfied have an incentive to displace the focal institution. This should especially be the case when the coalition of the dissatisfied is small and institutional inertia is high, as is the case in the climate regime. On the whole, this case study demonstrates that focal institutions exert a centripetal pull even in conditions under which we would expect this to be unlikely.

Finally, there is not much evidence to support functionalist arguments as an alternative explanation for the development of the climate regime. As was the case in the ozone regime, policymakers negotiated the first global climate institutions under conditions of acute uncertainty about the state of the world. Yet in contrast to the flexible ozone institutions, institutional change within the FCCC process is exceptionally difficult to achieve. Annexes and amendments require a three-fourths majority, while protocols can only be adopted by consensus. If uncertainty had guided institutional design, we would not expect institutional inertia in the climate regime to be so high. Additionally, climate science and economic impact assessments have become more precise over time.[814] This development does not correspond neatly to the growth of complexity followed by potential re-centralization. Additionally, in contrast to the ozone and fisheries cases, the use of functionalist logic to justify institutional choices – i.e. policymakers' insistence that a particular institutional design or choice would increase the efficiency of cooperation – did not stand out in the data collected for this case study.

[814] See Intergovernmental Panel for Climate Change 2013.

CHAPTER 6

CONCLUSION

The expansion of institutional density has raised new questions about the nature of the international system for international law and international relations scholars. Many have assessed how an increase in institutional choices affects the behaviors of states. Others have examined how international institutions relate to one another as they populate denser policy spaces. Perhaps, scholarship suggests, one consequence is the growth of regime complexes, which are governance structures comprised of various institutions that are only loosely connected to one another. While we have learned much about how states and institutions operate in the context of particular regime complexes, our understanding of why institutional arrangements take particular forms and how they develop over time is still limited.

Global environmental regimes are ideal for an assessment on institutional emergence, stability, and change. Research suggests that the development of environmental regimes has been affected by the growth of institutional density.[815] Yet looking at particular regimes, we observe that they display significant variation in levels of complexity. Institutions that address ozone depletion are hierarchically structured in relation to one another, while those that deal with climate change are more loosely connected. Institutions involved in the governance of the global fisheries are mostly coherent but display some fragmentation. This dissertation seeks to understand what factors account for this variation in institutional development in the direction of greater or lesser complexity. It contributes theoretical insights about the micro-foundations of state choice and the macro-processes of institutional development. These, in turn, allow us to

[815] See Oberthür and Stokke 2011.

better understand the practical realities of global governance. To be able to construct the most effective responses to pressing environmental problems, it is essential that we have a firm grasp on the factors that drive the processes of institutional development.

Existing literature has primarily relied on two theoretical frameworks to explore state choice, institutional density, and regime complexes. Functionalism assumes that states create or utilize existing international institutions to reduce the transaction costs associated with cooperation. Any particular arrangement is therefore the result of rational actors deploying institutional choices towards the achievement of optimal efficiency. Regime complexes exist because they provide states with flexibility as they attempt to cooperate on complex global problems.[816] Empirical observations showing that states at times employ institutional choices that raise transaction costs challenge functionalist thinking.[817] Power-distributive explanations rest on the assumption that states make institutional choices to maximize their individual gains and minimize the costs of cooperation. They change the institutional landscape through forum shopping and institutional proliferation in their pursuit of distributive advantages, creating regime complexes in the process. This dissertation presents a theory that builds on power-distributive arguments as they relate to state choice while taking into account historical institutionalist insights about how existing institutions shape those choices and the resulting processes of institutional development.

The distributive historical approach this project puts forth argues that the institution(s) states create or engage to address new cooperation problems shape the forces of regime change and stability. There are always actors who are dissatisfied with

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[816] See Helfer 2004, 8; Keohane and Victor 2011, 15-16.
[817] See Benvenisti and Downs 2007; Drezner 2013; Schneider and Urpelainen 2013; Van de Graaf 2013.

the distribution of costs and benefits imposed by an established arrangement. To obtain distributive advantages, the dissatisfied try change existing institutions and, failing that, turn to forum shopping and institutional proliferation. While these strategies can and do lead to the development of regime complexes, institutional counter-forces may create a status quo bias that limits the severity of institutional change. Regimes tend to develop in a strongly path-dependent manner because institutions are resistant to change and because the status quo beneficiaries employ strategies that blunt the impact of the dissatisfied actors' forum shopping and proliferating efforts. The centrifugal forces of dissatisfied states' proliferation efforts, in other words, can be countered, under certain conditions, by the centripetal force of existing institutions and status quo powers.

Across the three cases, we have seen that dissatisfaction with status quo institutions serves as the driver of institutional change. When the coalition of the dissatisfied is large enough, as in the ozone case, it can change the status quo institution(s), leading to lesser complexity. Yet because of institutional inertia, this is often not the case. When existing institutions have a large number of veto actors, rendering them resistant to change, the intensity of distributive conflict associated with the issue shapes institutional development. If the stakes of the distributive conflict are high, as in the climate case, dissatisfied actors have the greatest incentives to attempt to displace status quo institutions through proliferation and forum shopping, generating greater complexity. When the intensity of distributive conflict is low, as in the fisheries case, the dissatisfied have an incentive to change the system without disrupting it. Thus, their actions generate moderate complexity.

In each case, the status quo beneficiaries have resisted the change agents through three strategies. Most obviously, they have blocked attempts to alter the regime's existing institutions. When the coalition of the dissatisfied forum shopped, seeking to change existing institutions traditionally outside of the regime to address the particular issue, status quo powers have stood in the way as well. In cases in which the collation has proliferated, creating new institutions to address the issue, the status quo powers have simply refused to sign on to the new instruments. Finally, in the climate case, the status quo actors engaged in regime-supporting proliferation, creating new agreements outside of the UN framework with the intent of shoring up support for the UN process.

This dissertation enhances our understanding of how institutions incentivize and shape state behavior, and how state choices, in turn, drive institutional development. As such, it has important implications for global governance, especially in regards to the provision of public goods. Regimes with broad membership and support are necessary to effectively address issues like the global commons. Such regimes' focal institutions must offer the vast majority of members tangible benefits that reduce incentives for defection and displacement. Additionally, they must be flexible enough to adapt to dissatisfaction and a changing environment. Without, at the least, these two characteristics, the likelihood of states engaging in forum shopping and proliferation increases, as does the likelihood of efficient cooperation.

The remainder of this chapter consists of four sections. The first reintroduces the distributive-historical approach and reviews the major findings of the case study chapters. The second section situates the contributions of this project in the existing literature, explaining how they build on the insights of previous scholarship on institutional choice and regime development. The implications the findings presented here have for global environmental governance are discussed in the third section. The chapter concludes with a discussion of this dissertation's limitations and avenues for future research.

A Distributive Historical Approach to Institutional Choice and Regime Development: Theory and Findings

This dissertation has sought to understand the ways in which states' institutional choices translate into processes of institutional development that trend towards greater or lesser regime complexity over time. The regimes constructed to address ozone depletion, the overfishing of global stocks, and climate change were selected based on a most-similar systems design: the cases are as similar as possible in most respects but vary in the dependent variable. This design allows the researcher to hold constant a number of factors, thereby increasing analytical leverage. Process tracing was employed to provide careful description of state choices and the processes of institutional change they triggered.

The distributive historical framework rests on the assumption that status quo dissatisfaction serves as a trigger for institutional change. While dissatisfaction can have a number of sources, the focus here is on the material impact of substantive rules that guide cooperation in a given regime. Actors who believe they can achieve greater distributive advantages by altering these rules will attempt to achieve institutional change. They will first turn to the regime's existing institutions, since this is the least costly option. If they are unable to achieve their goals there, they can employ two other strategies. First, the dissatisfied can forum shop in an attempt to create new rules on the given issue in institutions outside of the regime. Second, they can proliferate, creating new institutions to address the issue.

The efforts of the agents of change often prove futile, however, because pre-existing institutions exert a centripetal pull that makes radical divergence from the status quo difficult to achieve. When a new cooperation problem emerges and states select or create a focal institution that has large set-up costs, generates network effects, and provides institutional benefits, the regime is likely to develop in a path-dependent manner that limits divergence from the status quo. Set-up costs are the investment of resources necessary to establish an institution. Network effects are the benefits derived from linkages and cooperation between institutions. Institutional benefits refer to material payoffs. These mechanisms create positive feedback: small bonuses actors receive due to their membership in the institution. The greater the set-up costs, institutional benefits, and network effects, the lower the incentives are for states to make institutional choices that deviate from the status quo, and the less likely the regime is to develop towards greater complexity. When these mechanisms are present, the agents of change can forum shop and proliferate, but those satisfied with the status quo can block their efforts in pre-existing institutions and can simply refuse to join newly created ones. Through these actions, they limit the severity of institutional change towards greater complexity.

When the dissatisfied actors attempt to change a regime, their institutional choices and the effect these have on patterns of development towards greater or lesser regime complexity are the result of three factors: the intensity of distributive conflict, institutional inertia, and the size of their coalition. The intensity of distributive conflict refers to the material stakes that are implicated by a particular issue. Institutional inertia depends on the number of veto players in pre-existing institutions. These individuals or collective actors whose agreement is necessary for institutional change to occur are determined by formal decision-making procedures. The size of the coalition of the dissatisfied refers to the number and resources of states seeking institutional change. These three factors interact with one another, yielding combinations the theory expects will result in four differing likely outcomes. For the sake of brevity, this section will review the combinations of independent variables present in the three cases examined in this dissertation, their expected outcomes, and the extent to which the findings support the expectations.

Ozone Case: Expectations and Findings

The ozone regime examined in chapter 3 has been defined by low-intensity distributive conflict, low institutional inertia, and a large coalition of the dissatisfied. In this scenario, the coalition of the dissatisfied is sufficiently large to overcome the veto actors in the focal institution. Because the intensity of distributive conflict is low, it is likely that the dissatisfied can also agree on the substance of new rules. Status quo dissatisfaction will therefore result in a nested layering of institutions: the change actors will create new rules within the focal institution, which will limit the extent of complexity.

The findings in the ozone case are supportive of these expectations. On the whole, the ozone regime has maintained low levels of complexity over time. The bargains struck during the creation of the regime's focal institutions are key to explaining this outcome. To secure the cooperation of developing states, industrialized countries agreed to finance the Multilateral Fund. Developing states can draw on the financial and technical assistance of the fund to reduce their reliance on ozone-depleting substances. In return, they agreed to the controls sought by industrialized states, which provided the latter with economic and environmental benefits. Institutional benefits reach all important actors, incentivizing them to refrain from forum shopping or proliferation behaviors that would create greater complexity.

Still, the regime has evolved, with status quo dissatisfaction serving as the driver for institutional change. Developing states have had to secure the replenishment of the fund in three-year intervals. To maintain the economic advantage of their chemicals industries, industrialized states have needed to internationalize regulation in place domestically. Due to the low-intensity distributive conflict, the latter have been able to provide the financial incentives necessary to secure the cooperation of the former and both groups have been able to agree on a path forward for the regime. The dissatisfied, consisting of a large coalition of developing and industrialized states, have been able to achieve change within the focal institution due to its low inertia. The process of nested layering that has resulted from the adoption of four amendments to the Montreal Protocol has generated little complexity.

Fisheries Case: Expectations and Findings

The fisheries regime examined in chapter 4 has been defined by low-intensity distributive conflict, low institutional inertia, and a small coalition of the dissatisfied. Since the dissatisfied consist of few states, they are unable to achieve change by overcoming the veto players in the focal institution. Because the stakes associated with the distributive conflict are low, the dissatisfied will prefer to keep the regime's existing institutions intact while targeting only specific rules for change. They will seek to create new rules at existing institutions outside of the regime. Because the coalition is small, the status quo powers will likely be able to block their efforts at achieving substantive change in these institutions as well. The dissatisfied may succeed in conversion, however, which is the redirection of pre-existing institutions towards new issues through small, informal changes. The dissatisfied will also likely engage in institutional proliferation, creating an overlapping layer of new rules that are generally compatible with the system. These processes will push the regime moderately towards greater complexity.

The findings in the fisheries case are consistent with the expectations of the distributive historical approach. Since its emergence in the mid-1970s, the global fisheries regime has gradually grown moderately more complex. As in the ozone case, the early process of institutional creation – in this case, the Law of the Sea Convention and its fisheries provisions – is vital to understanding the subsequent development of the regime. The LOSC created 200-mile exclusive economic zones (EEZs) that grant states the right to the natural resources beyond their coastlines. Because of their material benefits, EEZs proved popular in virtually all coastal states, rendering the LOSC's status at the center of the fisheries regime immune to serious challenges. The EEZ also greatly reduced the intensity of distributive conflict within the regime, since it enclosed the vast majority of the world's fish stocks. Yet it did not resolve the issue of straddling and migratory stocks. Coastal states seeking an expansion of sovereignty over these stocks formed the coalition of the dissatisfied. The coalition was small and unable to achieve change through the focal institution, despite low institutional inertia. The dissatisfied attempted to achieve change through forum shopping in pre-existing venues and by creating new institutions. Status quo powers resisted these efforts by blocking change in pre-existing institutions and refusing to become party to new agreements. The conversion and overlapping layering processes of change in the fisheries regime increased complexity over time, but only modestly so.

Climate Case: Expectations and Findings

The climate regime in chapter 5 has been marked by high intensity distributive conflict, high institutional inertia, and a small coalition of the dissatisfied. A small coalition of the dissatisfied is unable to overcome the high inertia of the focal institution, and so has to pursue its goals through other strategies. Because the intensity of distributive conflict is high, the dissatisfied have an incentive to abolish or at the least undermine the regime's institutions. They are likely to do so through institutional creation intend to displace the existing system. The dissatisfied are also likely to forum shop, pursuing the change of pre-existing institutions, but will be unlikely to achieve formal change due to their small numbers. These efforts may however result in conversion. Of the three cases, the climate regime is expected to experience the greatest movement away from the status quo and towards complexity.

Evidence in the climate chapter is only partially supportive of the expectations. In contrast to the ozone and fisheries cases, climate change is marked by a high degree of distributive conflict. As expected, the result is significant movement towards regime complexity. A small coalition that included powerful actors was dissatisfied with the distributive implications of the Kyoto Protocol, perceiving the burdens the treaty imposed on them so significant that they sought to replace the institution. Due to the high institutional inertia within the focal regime, the dissatisfied had to pursue change outside of the UN process. In attempting to undermine the Kyoto Protocol, the agents of change forum shopped to venues outside of the regime and engaged in institutional proliferation. Their efforts resulted in conversion and displacement, which created greater complexity in the regime. These findings are consistent with the distributive historical approach.

The climate case study also yielded two unexpected conclusions, both of which have important implications for international institutional development and for regime complexity. First, like the dissatisfied, status quo powers also engaged in forum shopping and institutional proliferation. Yet they directed these strategies towards different goals. Their aim was to strengthen support for the focal institution while also enhancing their barraging power within it. The resulting processes of conversion and overlapping layering contributed modestly towards greater complexity in the regime. Second, new developments suggest that the climate regime may be re-centering around the UN institutions. This is surprising, given the high intensity of distributive conflict and a decade of fragmentation. This development suggests that focal institutions exert a centripetal pull even in unlikely circumstances.

Alternative Explanations: Expectations and Findings

The case studies also tested for alternative explanations rooted in functionalist arguments. First, they looked for a positive correlation between regime complexity and uncertainty about the state of the world, defined as the extent of scientific, technical, and economic knowledge states have that allows them to predict the consequences of their own actions, the actions of other states or of international organizations. Within the ozone case, there is strong evidence that uncertainty affected institutional design. Because scientific and economic analyses regarding ozone depletion and adaptation measures were imprecise during the construction of the focal institutions, policymakers inserted flexibility mechanisms that allowed them to alter the institutions as uncertainty decreased. Within the other two cases, regimes moved towards complexity as uncertainty about the state of the world declined over time, indicating no clear relationship between the uncertainty variable and outcomes.

If we look across regimes, it does appear that uncertainty about the state of the world and regime complexity correlate: ozone, fisheries, and climate progress from least to most uncertain and least to most complex. There is little evidence to establish causation, however. Because functionalism broadly finds the explanation for institutions in the efficiency-enhancing functions they perform for those who create them, the case studies also identify instances in which states invoke functionalist logic when they create or select international institutions. Functionalist rationale stood out most in the ozone regime. As discussed, uncertainty played a large role in shaping the design of the focal institution. Policymakers also referred to selecting institutions based on the functions they perform best. In the fisheries regime, states invoked functionalist logic when delegating fisheries management to regional organizations. But on the whole, there is insufficient evidence to indicate that policymakers consistently selected or designed new institutions to respond efficiently to uncertainty or other variables. Functionalist arguments alone cannot explain institutional choices and macro-historical patterns of institutional development in these cases.

Contributions to Scholarship

The findings in this dissertation have important implications for our understanding of states' institutional decision-making, regime development, and the nature of the international system. They indicate, first, that distributive considerations are at the forefront of states' institutional decision-making. Second, although dissatisfied actors constantly contest existing institutional arrangements, institutional development tends to be path-dependent. The processes of institutional change that result from the choices of the dissatisfied are shaped by existing institutions and status quo powers and can lead to various degrees of complexity. Third, although forum shopping and proliferating strategies associated with growing institutional density are ubiquitous, they have not contributed to any major transformation in the international system.

Institutional Choice

Although there are always limitations when it comes to collecting data on interests and preferences, the findings shed light on the factors that motivate states' institutional choices. Chapter 2 outlines the contrasting assumptions functionalist and power-distributive theories rest on. The former expect that states select institutions for the efficiency-enhancing functions they perform. The latter argue that states' actions are driven by distributive considerations. We know of course, and this dissertation shows, that neither of these assumptions wholly explains behaviors or outcomes in the international system. Yet the weight of the evidence suggests that distributive considerations and the capacities of actors are the primary drivers of institutional choice.[818]

In each case study, the actors who view themselves as bearing relatively higher costs of cooperation continually contest the status quo in order to achieve greater

[818] In this sense, this dissertation is consistent with Raustiala and Victor's contribution. The authors focused on "the particularistic interests of economic actors, rather than aggregate efficiency concerns, as the key causal driver" of property rights and the international regime complex for plant genetic resources. Raustiala and Victor 2004, 282. See also Colgan et al. 2012.

distributive advantages. The intensity of distributive conflict shaped these actors' strategies. In the fisheries regime, for example, the intensity of conflict is low. Even though a large number of states are dissatisfied with aspects of the regime, the stakes are relatively minor. The incentives are such that the dissatisfied do not pursue changes that will fundamentally undermine the focal institution. The economic implications of the climate regime as constructed under the FCCC and Kyoto, however, were relatively high. This reality drove states dissatisfied with it, particularly the United States, to seek to displace the focal institution. As a result, the US engaged in strategies intended to create an alternative to the existing regime.

As power-distributive theories expect, states' institutional choices are limited by their position in the international system.[819] In the cases examined here, powerful states were the most prolific proliferators. These actors have the resources to create new institutions and entice others to join them by providing benefits to their members. This is a tactic that the US, European states, and China have pursued in the climate regime. Yet as research outside of the power-distributive mold has demonstrated, forum shopping is a more egalitarian endeavor.[820] The cases here indicate that developing states are adept at forum shopping. The earliest instance of the strategy uncovered here occurred in the 1950s, when Latin American states pursued fisheries policies at the Organization of American States to press maritime powers into action through the United Nations. Developing states have continued their attempts to shape the fisheries regime by engaging venues outside of the focal institution, having most recently turned to the Convention on Biological Diversity to press for a new LOSC implementation agreement.

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[819] See Benvenisti and Downs 2007; Drezner 2013; Krisch 2005.
[820] See Helfer 2004.

Regime Development

Having established the prevalence of forum shopping and institutional proliferation, scholarship has often concluded that the strategies drive regimes towards greater complexity.[821] While descriptive of some cases, such accounts fall short in their inattention to the forces that drive regime stability and blunt the effects of forum shopping and proliferation. As a whole, the case studies suggest that the path-dependence mechanisms that often emerge with the creation of a focal institution bias regime development away from radical change. Analysis in the cases focused primarily on institutional benefits, but it is likely that network effects and large set-up costs play a role as well. Within fisheries and ozone governance, there has been relatively modest movement away from the status quo established during the regimes' founding moments. The regimes, of course, have changed and evolved as new institutions have entered the governance space. But importantly, their core rules and structures have remained intact and continue to shape state choices and institutional development. The main reason for this stability is that the UN Convention on the Law of the Sea and the Vienna Convention for the Protection of the Ozone Layer and its subsequent implementation agreements distribute broad material benefits to their member states. The fisheries and ozone regimes thus incentivize state parties against making institutional choices that will undermine the focal institutions.

Even within the climate regime that has grown significantly more complex over time, the focal institution has retained its central position. The Framework Convention on Climate Change has endured despite the efforts of powerful countries to establish an alternative path. The continued relevance of the FCCC is more difficult to explain, since

[821] See Alter and Meunier 2006; Benvenisti and Downs 2007; Drezner 2013.

it does not confer the broad material advantages that the ozone and fisheries regimes bring to most member states. After a decade of fragmentation and policy and negotiation failures, why did the world's biggest emitters not start anew with an agreement outside of the framework? The answer is that the FCCC and its Kyoto Protocol benefitted developing states by giving them Annex II status and access to finance through the Clean Development Mechanism. Developing states, whose cooperation is necessary for effective global action, had therefore little to gain by defecting from the regime. Additionally, the FCCC is plugged into the international systems' institutional infrastructure, providing members with network effects. Its secretariat possesses the capacity to coordinate and implement new institutions and was assigned such duties by the 2015 Paris Agreement.

The findings in this dissertation support the argument that through their provision of material and other benefits, focal institutions incentivize groups of states to protect the status quo. These actors can inhibit change in two ways: by blocking change in the focal institution *and* in other institutions, and by refusing to sign on to newly created institutions. Institutional inertia enhances the first of these options. The decision-making procedures in many existing, especially universal institutions create so many veto actors that meaningful change is difficult to achieve. For example, states wishing to alter the fisheries regime but unable to do so through LOSC have attempted to achieve their goals through the Convention on Biological Diversity and the *Convention* on International Trade in Endangered Species; there, their efforts were blocked by veto actors. States' attempts to change the climate regime through the World Trade Organization and Security Council have also been unsuccessful. While it is easy to forum shop between institutions, it is much more difficult to achieve change through the creation of new rules within them.

Similarly, institutional proliferation is only the first step towards achieving meaningful change in the status quo. Third parties must accept the new rules for this strategy to be effective,[822] and those seeking to prevent change can simply refuse to do so. This scenario played out in all three cases. In the fisheries regime, for example, the status quo powers first sought to block the beginning of negotiations for the Fish Stocks Agreement. Unable to achieve that goal, they argued for the instrument to be legally non-binding. Having lost that fight as well, the status quo powers simply refused to accede to the treaty. The adoption of a second commitment period of the Kyoto Protocol has also failed due to a lack of ratifications. Status quo actors can prevent new agreements in even earlier stages by refusing to attend conferences at which they will be discussed, as they did in the ozone case. In one instance in the early formation of the fisheries regime, the agents of change considered an agreement outside of the UN but did not even move beyond diplomatic discussions, knowing they would not secure the cooperation of a necessary number of third parties.

In addition to demonstrating the limits of forum shopping and proliferation, this dissertation contributes to scholarship through its nuanced assessment of the relationship between state choices and institutional development. The framework laid out in chapter 2 argues that the same choices can lead to different patterns of institutional change depending on how they are deployed, and that these patterns in turn shape the degree of complexity. Forum shopping, for example, is frequently observed in the present case studies as well as in existing literature. Its pervasiveness is often taken as a sign of the

[822] See Schneider and Urpelainen 2013.

presence of regime complexes.[823] However, forum shopping alone often does not alter the status quo significantly. Even when the change agents' efforts are not completely blocked, as they were at the UNSC and WTO examples mentioned above, they often result merely in the creation of a working group or a soft law instrument. The resulting process of conversion typically does not affect norm conflict or institutional integration, and as such, contributes to complexity very modestly. Further, states deploy forum shopping not just to forge an alternative path, but also to shore up support for the status quo.

A look at institutional proliferation in these case studies yields a surprising finding. Proliferation tends to be depicted as a strategy used to undermine pre-existing institutions,[824] and there is evidence of this in the climate regime examined here. The United States created a number of bilateral and small multilateral institutions to establish an alternative to the Kyoto Protocol with the intent of displacing the UN process. As it affects norm conflict, institutional integration, and actor constellations, displacement has the most complexity-generating potential.

Yet in the climate regime, actors also engaged in proliferation to strengthen the position of the focal institution. European states entered into agreements with large developing country emitters in hopes that bilateral discussions would further the FCCC negotiations. The EU also launched a bilateral climate agreement with the United States, hoping to reengage the US with the regime. China has entered into bilateral climate agreements with smaller developing countries, providing them with aid in an apparent exchange for securing their commitment to the UN institutions. Overall, these actors'

[823] See Alter and Meunier 2006; Raustiala and Victor 2004.
[824] See Benvenisti and Downs 2007; Colgan et al. 2012; Drezner 2013; Morse and Keohane 2014; van de Graaf 2013.

intentions were to galvanize support for the FCCC process, as well as to strengthen their bargaining position within it. Since the status quo powers created institutions that were adapted to the pre-existing system, the resulting process of change was overlapping layering. While it affects complexity, its effects are milder than those of displacement.

International System

What does this all mean for international political development and regime complexity? Some scholars have argued that regime complexity and states' associated strategies undermine the legitimacy of and effectiveness of international law[825] and serve towards the further empowerment of the powerful.[826] Yet the findings in this dissertation indicate that, to the extent that they exist in the three cases examined, forum shopping, institutional proliferation, and regime complexity have not radically altered the state of the international system. Although international regimes are constantly evolving as state actors challenge the status quo, change happens on the margins and their core structures tend to remain intact. It is possible that these small changes result in large transformations over time, but there is no evidence of this in the three cases analyzed here. The fears of the normatively undesirable consequences expressed above are unfounded in the cases examined in this dissertation.

Implications for International Governance

The global community faces serious and evolving environmental challenges. The findings in this dissertation yield two major implications for addressing them. First, cooperation on global commons problems requires the establishment of stable and

[825] Benvenisti and Downs 2007; Drezner 2013; Hafner 2004.
[826] Benvenisti and Downs 2007; Drezner 2013; Helfer 2009.

effective comprehensive regimes. This goal is most likely to be achieved through institutions that provide tangible material benefits to a critical number of affected actors. One way of doing so is by linking interrelated issues together, as policymakers did through the Law of the Sea Convention. The LOSC was made possible only by developing states conceding to maritime powers on navigation rights, and the maritime powers conceding to developing states on exclusive economic zones. Yet this kind of give-and-take is not possible if one or more issues do not lend themselves easily to being linked. Additionally, negotiating a treaty so wide in scope among all of the world's states can be an excruciatingly long process, as the oceans regime shows. When it comes to environmental issues, time is often of the essence, so this approach may not be ideal.

The most optimal path is likely the one taken in ozone governance. In that case, it was industrialized states that came to an agreement on the focal intuitions amongst themselves. Once they presented a united front, they turned their attention towards securing the cooperation of developing countries, providing them with financial incentives to join the ozone institutions. When possible, members of the international community should follow this model, avoiding the launch of new global regimes via universal negotiations. Rather, they should begin in small groups of important actors. A comprehensive regime, especially in an issue area marked by high degrees of distributive conflict, is only possible when the most powerful states are in agreement amongst one another. They can then use financial incentives and/or unleash market forces to broaden cooperation to a wider group of states. This may seem undemocratic but it is likely to be most efficient. As we saw in the climate case, it is difficult for nearly 200 states to negotiate an agreement that satisfies all sufficiently. Although the Paris Agreement was reached in such a way, the instrument lacks universal goals and standards and there is debate as to whether it is legally binding. It is therefore just a small step in the right direction. Even then, it is questionable that the agreement would have been possible without the engagement of the US and China outside of the UN process.

The second main takeaway this dissertation presents is that when it comes to complex environmental problems, flexibility can be an important mechanism that ensures stability. While institutional inertia insulates focal institutions from change, it can exacerbate dissatisfaction. Cooperation on environmental issues is constantly affected by new scientific or technological developments, as well as by other changes in exogenous circumstances. If the focal institution is overly rigid, it can impede the efficiency of cooperation by reducing states' abilities to adapt to such changes. Institutions should be designed to be adaptable to the ever-changing circumstances.

Conclusions

This dissertation yields important theoretical and empirical insights about institutional selection and regime development. However, it also suffers from some limitations. First, it is possible that the findings in all three cases are limited to public goods, where widespread participation is essential for effective cooperation. In the realm of international trade, for example, status quo powers do not possess a comparable ability to retard institutional change. The agents of change can form smaller club institutions and achieve their goals without the consent of the status quo powers. States that prefer greater liberalization can achieve it through layering bilateral or small multilateral institutions atop the focal institution. States that prefer the status quo can simply ignore the change agents' efforts. The ability to change the landscape without the cooperation of status quo powers also reduces the incentives for the dissatisfied to displace the existing system.

The same is true of the multilateral development infrastructure, as exemplified most recently by the establishment of the Asian Infrastructure Development Bank. Unable to wrest greater voting power away from the United States and European countries in the World Bank, China launched its own institution. The US refused to become a member, but this mattered very little – besides attempting to sway allies from joining the AIDB, the US could do very little to prevent change in the regime. China, on the other hand, could achieve its goal without needing to displace the World Bank.

In such cases, there are fewer forces restricting institutional proliferation that can generate complexity; however, movement towards complexity is also limited by the fact that displacement is unnecessary. Having established with this dissertation the forces of institutional stability and change in global commons problems, a natural avenue for future research is to examine the extent to which they explain processes and outcomes in other sectors like international trade and multilateral development. In addition to enriching our knowledge about institutional choice and development, a cross-sector comparison could also serve as a study about effectiveness. Because wide participation is necessary for cooperation on global commons, fragmentation in such regimes is unlikely to be efficient. Yet greater complexity in issue areas like trade and development could enhance the impact and effectiveness of international institutions by providing more of the particular good. Alternatively, greater complexity could reduce the clarity of rules in trade and lead to inefficiencies and duplication in development.

Second, in each of the three cases examined here, states selected a focal institution early on, which strongly shaped the subsequent development of the regime that issue. The argument put forward here is most likely to apply to other cases that followed a similar early path of institutional development. To extend the research on institutional choice and regime development, environmental issues in which multiple institutions emerged as the regime was formed should be examined and compared to the findings presented here.

Finally, the climate chapter presents an interesting case on displacement. Since the formation of the climate regime, the United States advocated for the adoption of a flexible, bottom-up approach to the problem rather than globally imposed emissions targets. Successive US governments advocated this approach through the creation of new institutions. While they were unsuccessful in creating an alternative to the UN process, the newest agreement negotiated under the UN umbrella reflects the position of the United States. A pressing question to be answered is whether the US proliferation activities had any effect on displacing the focal institution’s norms while keeping its structure intact.

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