

A STRONG INSTITUTIONAL CLIMATE: REGIONAL TRADE NETWORKS AND CLIMATE  
ACTION

by

EMILY ANNE SANCHIRICO

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Student: Emily Anne Sanchirico

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This thesis has been accepted and approved in partial fulfillment of the requirements for the Master of Arts degree in the Environmental Studies Program by:

Ronald Mitchell	Chairperson
George Sheridan	Member
Michael Fakhri	Member

and

Kimberly Andrews Espy	Vice President for Research and Innovation Dean of the Graduate School
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Original approval signatures are on file with the University of Oregon Graduate School.

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## THESIS ABSTRACT

Emily Anne Sanchirico

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Title: A Strong Institutional Climate: Regional Trade Networks and Climate Action

Climate change has been described as a malign, wicked, and super wicked problem. I focus on key characteristics that make international collective action challenging: *asymmetry, fear of free riding, scientific uncertainty, and inherent interdependencies*. I argue that an institution designed to tackle such a complex problem requires a key set of features: *leadership, linkage, quality information, differentiated obligations, monitoring/enforcement, transparency, and flexibility*. I assess the United Nations Framework Convention on Climate Change to determine what aspects are missing. I then ask why the European Union, with incentives to the contrary, set broad unilateral goals. I argue that the framework of political and economic integration made deep cooperation possible. Lastly, I consider whether this experience is specific to the EU and ask whether regional trade networks have a role in the global arsenal of climate change solutions.

## CURRICULUM VITAE

NAME OF AUTHOR: Emily Anne Sanchirico

### GRADUATE AND UNDERGRADUATE SCHOOLS ATTENDED:

University of Oregon, Eugene  
Barnard College/Columbia University, New York City

### DEGREES AWARDED:

Master of Arts, Environmental Studies, 2013, University of Oregon  
Bachelor of Arts, Political Science, 2010, Barnard College/Columbia  
University

### AREAS OF SPECIAL INTEREST:

International Environmental Politics

Climate Change

### PROFESSIONAL EXPERIENCE:

Graduate Teaching Fellow, University of Oregon, 2012-13

IDRF Program Assistant, Social Science Research Council, 2010-12

Outreach Intern, WITNESS, 2009

Women's Human Rights Program Intern, Amnesty International, 2008

Publications Intern, Council on Foreign Relations, 2008

Intern, Global Trade Watch, 2007

Intern, Huairou Commission, 2007

### GRANTS, AWARDS, AND HONORS:

Boren Scholar, Argentina, 2008

Dean's List, Barnard College, 2006-2010

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# CHAPTER I

## INTRODUCTION

Climate change, an international problem that transcends political and geographic boundaries, cannot be met with a single solution. To date, attempts to mitigate its social and environmental externalities have resulted in “a regime complex: a loosely coupled set of specific regimes” (Keohane and Victor 2011: 1). This thesis considers what role, if any, regional trade agreements may have in that network of solutions. I look at the successes and shortcomings of two institutions: one global, the other regional. By examining the United Nations Framework Convention on Climate Change (UNFCCC) and Kyoto Protocol (global) alongside the European Union’s climate action program (regional), I work to contribute to theories of institutional fit (Young 2010). When met with the same problem, climate change, why do two different types of institution develop, and why does one work better? What conditions help to explain the variation? I describe the problem structure of climate change, work through rational design theory to envision an ideal institution, and then attempt to determine whether the global or regional case study most closely approximates that prototype.

Climate change is plagued with aspects of upstream/downstream asymmetries. In one sense, it *is* a Tragedy of the Commons: the world has over-taxed the atmosphere with greenhouse gas emissions, and all actors are both perpetrators *and* victims. However, because some will not suffer the consequences as greatly, or immediately, they do not perceive themselves to be victims, resulting in dynamics



more typical of upstream/downstream problems. In the classic Tragedy of the Commons model, all actors have mixed motives. They have at least some incentives to contribute because, although they would rather not assist, they want to see the problem solved. Institutions can suffice with “simple issue-specific reciprocity” (Mitchell and Keilbach 2001). With climate change, getting countries to act is more complex than demonstrating that it is in everyone’s interest. If countries do not identify as victims, they do not have the same incentives to cooperate.

In part due to this complexity, scholars, and policymakers have deemed climate change an inherently malign (Miles et al 2002), wicked (Rittel and Webber 1973), or super-wicked (Levin et al 2012, Lazarus 2009) problem. It is a global dilemma with numerous actors, and externalities are asymmetric (Mitchell and Keilbach 2001). Many of the most immediate costs will be borne by developing countries, whose ability to influence international politics is limited. Powerful non-state actors, such as multinational oil companies, have strong incentives to maintain the status quo. The major state players, those in the best position to serve as leaders, most notably the United States and China, do not yet appear to see themselves as victims, and thus may have the least to gain from cooperation. Adhering to emission reductions would force them to alter lifestyles that depend on fossil fuel dependent industries. Attempts to form an institution are plagued by uncertainty, free riding, compliance, and distribution struggles (Koremenos et al 2001). Engaging countries would require a recalibration of the perceived costs and benefits of participation.

Given the above scenario, we should expect to see few countries contributing to climate change progress unless the entire world has signed on. With the biggest

emitters balking at cooperation, others have little incentive to agree to clean up a problem that will not go away without full participation. Here I consider the European Union (EU) as a theoretical puzzle. Rather than resist further action and assuage their fears with the knowledge that their emissions are already lower than levels of much of the developed world, why has the EU set broad unilateral goals? A simplistic explanation would suggest that their tendency toward 'green' politics is the sole reason: the Europeans have driven forward climate change cooperation because they *care*. I seek to investigate that assumption. I argue that deep integration has been key to EU environmental successes. However, I go beyond shared preferences to suggest that it was the framework of the regional trade agreement, and economic incentives embedded within, that has allowed the EU to push climate change to the forefront of the regional agenda. Indeed, the normative argument, that there is a philosophy of environmentalism in Europe, only goes so far. The economic and political interdependencies inherent to the EU recalibrated the distribution of costs and benefits associated with climate change, resulting in a far different negotiation climate than that which would have existed in the absence of any institutional arrangement.

I seek to identify the factors that facilitated progress in the face of the obstacles laid out in the "malign problem structure" section and, separately, to assess which, if any, of those factors had to do with the specific forms of trade relationships that the EU had fostered (and hence might be transferable to other regions and other RTAs) or whether they were independent of those institutional developments in Europe. I am then better able to determine *why European states,*

*with incentives to do the contrary, have developed concrete frameworks to combat climate change, and whether the EU itself is the explanation.* I ask what features made the EU able/willing to act on climate change, and attempt to assert whether they can be attributed to it being a trade agreement. Can RTAs serve as an example of “building on the deep economic and political interdependence of modern states to enhance compliance”(Chayes, Chayes, and Mitchell 1998: 42)?

## CHAPTER II

### CLIMATE CHANGE: UNDERSTANDING MALIGN PROBLEM STRUCTURE

In climate change, we find a problem with high costs and benefits that are not immediate. When pieced together with asymmetric distribution of both costs *and* benefits, it is evident that cooperation will not come easily. Indeed, getting all participants to agree, and making sure that all significant states participate, becomes one of the greatest challenges of international collective action (Underdal 1992). Accordingly, “the more politically malign the problem, the less likely the parties will achieve an effective cooperative solution” (Underdal 2002a: 22). It is no surprise, then, that climate change has been defined as malign, wicked, and super-wicked.

Below, I work to show how each malign characteristic can be paired with a strong institutional feature. I focus on *fear of free riding, asymmetry, scientific uncertainty, and inherent interdependencies*. I argue that an institution designed to tackle such a complex problem requires a key set of features: *transparency, monitoring and enforcement, differentiated obligations, information sharing, flexibility, leadership, and linkage* (Miles et al 2002, Koremenos et al 2001, Brown Weiss and Jacobson 1998). I do not suggest that any one of these institutional characteristics, taken on its own, is *sufficient* to create a successful climate regime. Rather, they are all *necessary* components if progress is to meet the quick time frame that the problem structure of climate change necessitates. Nor do I suggest that any one institution will represent a singular solution. Climate change, a malign and complex problem, requires a full network of so-called solutions.

## **Free Riding: Transparency, Monitoring and Enforcement**

In the case of pollution leaking across borders “the worst that can happen to an actor contributing unilaterally to the provision of some collective good is that the benefits he thereby produces are harvested by others (acting as free riders)” (Underdal 2002: 19). The fear of *free riding*, or cheating, must be met with *transparent* institutions with strong systems for *monitoring* and *enforcement*. This is necessary when those who cause the problem do not seek to provide a solution (Levin et al 2012). Climate change is in many ways a classic Tragedy of the Commons. Everyone is both a perpetrator *and* a victim. Accordingly, all actors must trust that others contributing to climate change will work to reduce greenhouse gas emissions. As such, institutions should monitor compliance, and establish clear means of enforcement. Here I also return to the issue of capacity, and suggest that institutions must consider *why* an actor does not comply. Countries impacted by climate change, but not able to (financially or technically) meet strict environmental standards, should have access to assistance. Therefore, I argue for an enforcement system that incorporates management by differentiating between different sources of noncompliance (Chayes, Chayes, and Mitchell 1998, Young 2010, Tallberg 2002). In addition, the institution must foster *transparency* so that all actors know the rates of rule conformance of fellow stakeholders (Ostrom 1990).

## **Asymmetry: Differentiated Obligations**

Malign is defined as “a function of incongruity, asymmetry, and cumulative cleavages” (Underdal 2002a: 20). Incongruity can relate to both *externalities* and

*competition* (Underdal 2002a). Climate change is correlated most closely with the former. *Asymmetrical* distribution of externalities is particularly tricky, a characteristic most commonly associated with upstream/downstream situations (Mitchell and Keilbach 2001). Rittel and Weber reiterate the malign nature of “conflicting stakeholders” (Rittel and Webber 1973). I describe three varieties of asymmetry present in the problem structure of climate change: structural, economic, and normative. The developed world is responsible for the largest share of greenhouse gas emissions to date. Their economies depend on maintaining the fossil-fuel status quo. Meanwhile, developing countries assert their right to emit as they undergo the same industrialization process that the richer countries have already experienced. Here we see an example of a structural asymmetry (Young 1999: 69). Therefore, *differentiated obligations* are needed to account for the uneven costs and benefits associated with approaching a comprehensive set of solutions to climate change. Tit-for-tat (Axelrod 1984), or issue-specific reciprocity (Mitchell and Keilbach 2001), is not sufficient. Climate change is further plagued by economic asymmetries (Young 1999: 70). All actors are not created equal, and ability to comply with a regime varies deeply. Therefore, countries plagued by incapacity may need assistance, financial and technical, to comply with new environmental regulations (Vogel and Kessler 1998). Lastly, there are clear normative asymmetries at play. Actors who historically value environmental regulation (the Nordic countries, for example) are in a different situation than their less-affluent counterparts (such as Spain or Ireland), who may struggle to reach the high standards set by the EU. This last form of asymmetry may offer possibilities for

hegemonic-type action on the part of the former. This idea is revisited in the *leadership* section.

### **Scientific Uncertainty: Information and Flexibility**

*Scientific uncertainty* makes managing climate change difficult to achieve (Underdal 2002a, Rittel and Webber 1973, Levin et al 2012). Indeed, uncertainty and malignancy can be a lethal combination (Underdal 2002b). With climate change, we see two main forms of uncertainty: uncertainty about behavior and uncertainty about the state of the world (Koremenos et al 2001). Dealing with the former relates to the fear of cheating and need for enforcement described below. Mitigating the latter requires strong mechanisms for sharing scientific and technical knowledge. Institutions must facilitate learning and knowledge sharing via systems geared at disseminating *quality information* to mitigate the uncertainty regarding climate change. Doing so would require the development or existence of epistemic communities (Haas 1992), which relies on the socially constructed character of environmental knowledge (Jasanoff 1998). How two countries implement the same set of rules may vary greatly, resulting in different sets of technical and social controls. How to monitor divergent methods further complicates the international environmental arena. There is a need to create “the background conditions under which participants will see the need to standardize their own actions in order to protect the environment, and thus will come to build global communities of shared mission and belief” (Jasanoff 1998: 87).

Responding to uncertainty also requires both flexibility mechanisms and institutional flexibility (Young 2010). Indeed, *flexibility* can enhance cooperation (Kucik and Reinhardt 2008, Koremenos et al 2001), and “allow institutional creation to move forward without fully resolving distribution problems or uncertainty about the future state of the world” (Mitchell and Keilbach 2001: 903). A successful climate regime must be able to adapt and change in response to new information or unexpected events. In light of scientific uncertainty, flexibility is important “if actors learn over time about new technologies and tasks” (Koremenos et al 2001: 1061). A rigid strategy would hamper the institution’s ability to adequately respond. Adaptive flexibility allows member states “to respond to unanticipated shocks or special domestic circumstances while preserving existing institutional arrangements” (Koremenos et al 2001: 773).

### **Inherent Interdependencies: Leadership and Linkage**

The fact that climate change is a global problem, paired with the *inherent interdependencies* (Rittel and Webber 1973) of environmental politics, results in hesitation for any one actor to enact change without the rest of the world agreeing to do the same. Environmental problems, as evidenced by the case of climate change, often do not adhere to geopolitical borders. States are polluting the same atmosphere. I return to this claim in assessing why the EU, facing the same set of disincentives to act, still chose to push forward concrete policy. A key component may be *leadership*; if powerful member states with more political capital want climate change on the agenda, they might have the sway to get it there. I argue,



however, that the preferences of strong actors do not prove sufficient. Rather, if a leader argues for an issue that is palatable, that issue will be considered more quickly than it would have been without a clear backer. Making an otherwise-unpalatable solution to an environmental issue palatable requires *linkage*. Underdal suggests that regimes suited to deal with malign problem must include one or more of three characteristics: selective incentives for cooperative behavior, linkages to more benign issues, or a system with high problem-solving capacity (Underdal 2002a: 23). I argue that *linkage* can take advantage of inherent interdependencies, shifting them from a malign characteristic to one that can enhance cooperation and effectiveness. Institutional design can capitalize on shared incentives of countries within an institution (Mitchell and Keilbach 2001).

*Fear of free riding, asymmetry, scientific uncertainty, and inherent interdependencies* make climate change fundamentally challenging to manage. I am here interested in Levin's assertion that "the central authority used to address it is weak or non-existent" (Levin et al 2012: 123). I outline below why the UNFCCC fits into the 'weak' category, and why the EU might do a better job. An institution capable of overcoming the obstacles that define climate change would need the ability to alter deeply rooted incentives. I work to assess whether the institutional features necessary to deal with an acutely malign or wicked problem structure are present in the UNFCCC and EU. I move beyond the normative argument, what an institution *should* look like, to how two variations have played out in practice. I ask why, when faced with the same malign problem, two institutions have varying degrees of success and influence. As I establish where each climate regime fails (and

succeeds), I attempt to explain *why*. I ask which features are due to characteristics of the EU, (such as leadership and economic ability to support differentiated obligations) or whether there are certain successes that are a result of working within the regional trade mechanism (monitoring/enforcement, information, flexibility, and linkage). Finally, I try to determine whether the EU succeeds due to the former or the latter, and whether its attributes are transferrable. If regional trade agreements can contribute to climate change progress, they deserve more careful consideration.

## CHAPTER III

### INSTITUTIONAL DESIGN IN PRACTICE: UNFCCC AND EU

Below I attempt to determine which climate regime, the UNFCCC/Kyoto Protocol or the EU, more closely approximates the ideal institution outlined above. When burdened with the fear of free riding, asymmetry, scientific uncertainty, and inherent interdependencies, how does each respond? I look to see whether they incorporate transparency, monitoring and enforcement, differentiated obligations, information sharing, flexibility, leadership, and linkage. I work to assess why the EU, in most cases, performs better than the UNFCCC/Kyoto Protocol as a means of better understanding the dynamics of institutional fit.

#### **Transparency, Monitoring and Enforcement**

##### ***UNFCCC***

The UNFCCC, adopted in 1992, set no binding limits on emissions, and did not include an enforcement mechanism. The objective of the UNFCCC reads as follows:

“The ultimate objective of this Convention and any related legal instruments that the Conference of the Parties may adopt is to achieve, in accordance with the relevant provisions of the Convention, stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. Such a level should be

achieved within a time frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner.”

(UNFCCC Article 2)

The language of the text is vague, but does signal both the need to stabilize greenhouse gas concentrations and the need to do so within a reasonable timeframe. Indeed, the commitments outlined in Article 4 reference almost all of the institutional features described above. All countries are required to contribute to *monitoring and transparency*, and are asked to “develop, periodically update, publish and make available to the Conference of the Parties, in accordance with Article 12, national inventories of anthropogenic emissions by sources and removals by sinks of all greenhouse gases not controlled by the Montreal Protocol” (UNFCCC Article 4:1a). However, in terms of *enforcement* in the treaty text, there is none. The treaty relies on self-reporting (UNFCCC Article 12). Climate change, a game with high incentives to cheat, requires more.

Recognizing the lack of enforcement, the Conference of the Parties (COP) to the UNFCCC designed the 1997 Kyoto Protocol to include binding reductions. Thirty-seven developed countries, and the EU, agreed to reduce their emissions to an average of 5% below 1990 levels. The first commitment period lasted till 2012, with few members reaching their targets. A more ambitious proposal, 18% reduction from 1990 levels between 2013 and 2020, is set to begin (*Kyoto Protocol*, 2013). Internationally binding emission reductions require the monitoring and enforcement that the UNFCCC lacked. The Kyoto Protocol includes a registry system,

reporting, and a compliance mechanism. However, it is important to note that countries still self-report. The compliance mechanism is an impressive example of a noncompliance procedure. It has two branches: facilitative and enforcement. The goal is to facilitate compliance, but also determine consequences when intentional violations become apparent. The system takes into account the need to combine management and enforcement (Chayes, Chayes, and Mitchell 1998, Young 2010, Tallberg 2002). It does well at differentiating between various reasons for noncompliance. Despite these successes, the reliance on self-reporting and lack of real consequences cripples the global climate regime. The consequences referenced in the enforcement mechanism largely include public notification of noncompliance, and the requirement that the member develop a new compliance plan. Indeed, the compliance mechanism is *not* legally binding, and the implementation of consequences “requires cooperation by the non-compliant Party” (Halvorsen and Hovi 2006: 171). It quickly becomes clear that the Kyoto Protocol relies heavily on voluntary action (Young 2010).

## ***EU***

By 1990, the EU had already made a commitment to stabilize carbon dioxide emissions. However, the first real climate change program was not launched until 2000. The program was a response to the Kyoto Protocol, and fears that the EU member states were not on track to meet their targets. It included a proposal for an emission-trading scheme, a directive on generating electricity from renewable energy sources, and a voluntary agreement with the auto industry to reduce carbon

dioxide emissions from cars (Dinan 2010). The second followed in 2005. It brought the idea of carbon capture and storage to the agenda (Dinan 2010). Although the EU dropped overall emissions by 8.6% by 2005, only Sweden and the UK were actually on track to meet their targets. Concerned, the EU enhanced its efforts to tackle climate change. At the EU summit in March 2007, national leaders committed to unilateral cuts of 20% in carbon dioxide emissions (relative to 1990 levels), and vowed to increase cuts to 30% if other countries agreed to join an international climate agreement.

To meet that goal, the Commission initiated a new set of legislation in 2008. The energy-climate package showcased a 20-20-20 plan. Carbon dioxide emissions would be reduced by 20%, renewable energy use would increase by 20%, and energy efficiency would improve by 20% (COM (2008) 30 final). All was proposed to happen by 2020. The energy-climate agreement “maintains the national targets for member states, together with a linear, legally binding trajectory for the period 2013-2020, including annual monitoring and compliance checks” (Dinan 2010: 476). In this one sentence we see *differentiated obligations*, *operational goals*, and *monitoring/enforcement*; key features for an institution designed to deal with the malign problem of climate change. In addition, the clear operational goals are legally binding. The Directorate-General for Climate Action, established in 2010, oversees the EU’s Emission Trading System (ETS) and keeps track of the reduction targets of all member states.

The original climate package includes a monitoring and enforcement mechanism (Decision No 280/2004/EC). The Decision recognizes that a mechanism

is needed to monitor “all anthropogenic emissions”, evaluate progress, and ensure “the timeliness, completeness, accuracy, consistency, comparability and *transparency of reporting*” (Decision No 280/2004/EC, Article 1). The mechanism thus serves not only as an indicator of progress, but also as a means of communicating between member states; successfully mitigating the fear of free riding. A 2011 proposal followed up, noting the need to improve the current monitoring and reporting system to take into account “the broader scope of the legislation [and] the increased number of addressees” (COM (2011) 789 final, 1). The new proposal is also a testament to the *institutional flexibility* of the EU, which is addressed below. Member states are allowed to implement the ETS in a manner that conforms to their own national contexts, and may adopt their own monitoring methodologies (Aakre and Hovi 2010). Concrete penalties exist when permit-holding industries do not fully cover their emissions: “First, the Directive requires publication of the names of noncompliant installations (‘naming and shaming’). Second, excess emissions must be offset in the following compliance period. Third, installations must pay a financial penalty per ton of excess emissions” (Aakre and Hovi 2010: 435).

### ***Explanations***

The EU benefits from the “broadest mandate...widest range of legal instruments at its disposal and the highest level of institutionalization” (Boas 2002: 62). Member states are required to include the full set of climate action into domestic legislation; participation is mandatory. “Member States shall lay down the

rules on penalties applicable to infringements of the national provisions adopted pursuant to this Directive and shall take all measures necessary to ensure that such rules are implemented” (EU Emission Trading Directive, Article 16:1). Unlike the UNFCCC, compliance is *not* voluntary. A “member state’s failure to comply with its responsibilities may result in enforcement proceedings at the EU level” (Aakre and Hovi 2010: 436). The real thrust of enforcement, then, is embedded in the structure of required political and economic integration. Climate regulation can be enforced because it falls under the full ‘*acquis communautaire*’ of the EU. Member states are required to comply with all EU-wide legislation. Failure to do so can involve strict penalties (as seen above in the case of the ETS), shaming, and withdrawal of financial assistance.

It is clear that “development of the EU-ETS’s potent enforcement system was facilitated by pre-existing EU institutions. In particular, the ECJ (European Court of Justice) could be used as an enforcer of last resort, should enforcement through domestic courts fail. In marked contrast, Kyoto had no corresponding pre-existing institutions to rely on for enforcement” (Aakre and Hovi 2010: 438). The institutional history of political and economic integration granted the EU authority to create legally binding directives, and to require effective monitoring and enforcement. In addition, the EU had enforced compliance with the *acquis communautaire*, under which climate change policy falls, for decades. The UNFCCC and Kyoto Protocol had no such history to fall back on, and, indeed, it has been clear that the parties to the convention are unlikely to cede any sovereignty to it, making a clear system of enforcement challenging.



## **Differentiated Obligations**

### ***UNFCCC***

Under the UNFCCC, developed countries are told to serve as leaders, and asked to help developing countries; here we see *differentiated obligations* (UNFCCC Article 3). Indeed, one of the main principles under Article 3 states:

“The specific needs and special circumstances of developing country Parties, especially those that are particularly vulnerable to the adverse effects of climate change, and of those Parties, especially developing country Parties, that would have to bear a disproportionate or abnormal burden under the Convention, should be given full consideration” (UNFCCC Article 3: 2).

However, the provision is vague, and there is no real system to address the issue of incapacity. Article 3: 3 states that “policies and measures should take into account different socio-economic contexts”, but offers no advice for *how*. The “mechanism for the provision of financial resources on a grant of concessional basis” (UNFCCC Article 11) does not explain how developing countries will be able to meet their goals. Therefore, although Article 4: 2-10 address *differentiated obligations*, the treaty lacks any real teeth to address the structural, economic, and normative asymmetries that are inherent to the problem structure of climate change. There is a clear recognition that developed countries need to serve as leaders, and that developing countries may need financial assistance, but there is 1) no system

established to enforce differentiated obligations and 2) no real mention of capacity building.

As addressed above, the Kyoto Protocol included several key improvements. The compliance mechanism stipulates that “the facilitative branch is to take into consideration the common but differentiated responsibilities of the Parties, and the circumstances pertaining to questions before it” (*An Introduction to the Kyoto Protocol Compliance Mechanism*, 2013). There is a strong emphasis on “common but differentiated obligations”; an effort to put the burden on the biggest perpetrators, the developed countries. Strikingly the differentiated obligations of the Kyoto Protocol are deeply bifurcated: developing countries actually have no binding obligations. Although developing countries are included in the 192 parties to the convention, they are not considered Annex I countries, and are not legally bound to emission reductions. Articles 2-9 reference obligations that only apply to Annex I countries.

Article 10 is the only one that includes commitments for *all* parties. Countries are told to “Formulate, implement, publish and regularly update national and, where appropriate, regional programmes containing measures to mitigate climate change and measures to facilitate adequate adaptation to climate change” (Kyoto Protocol Article 10(b)). However, they are more suggestions and have no corresponding enforcement mechanism. The Kyoto Protocol *does* take into account the role of developing countries. Under the Clean Development Mechanism (CDM), Annex I countries can gain credit for an emission reduction project in a developing country.

Unfortunately, the CDM does little to alter the issue of technical and financial capacity.

The fact that only developed countries have binding obligations has proven troublesome. The third largest emitter, China, faces no limits on its emissions (Victor 2006: 91). Non-Annex I countries are growing, and increasingly make up a large share of global emissions. The Kyoto Protocol has not yet been revised to reflect this new reality. Necessary actors, such as the United States, have, in part, refused ratification due to the sentiment established earlier: they will not participate if all perpetrators are not included in the agreement. The institutional design took into account the fact that developed countries were responsible for the greatest share of global emissions. However, failing to include all relevant actors, and to consider their potential for growth, turned into a barrier to active participation. The perception that a treaty is not based on principles of fairness and equity can decrease the willingness of states to negotiate and ratify treaties.

## ***EU***

The legally binding reductions within the EU were first established under the Kyoto Protocol, but dropped even lower under the EU's own 2008 energy-climate package. Cuts were greater for richer countries; poor countries were allowed increases, but at limited rates. The official language also references the need for *differentiated obligations and transparency*:

“The European Council agreed that the best way to reach such ambitious goals was for every Member State to know what was expected, and for the

goals to be legally binding. This meant that the levers of government could be fully mobilized; and the private sector would have the long-term confidence required to justify the investment needed to transform Europe into a low-carbon, high energy efficiency economy...the effort required of particular Member States and particular industries remains balanced and proportionate, and takes their own circumstances into account.”(COM (2008) 30 final: 3)

By taking individual circumstances into account, the EU actively pursues *differentiated obligations*. This is generally handled in two ways. On the one hand, we see a “harmonized ETS covering the whole Union will be best suited to the internal market, with common rules to ensure a level playing field” (COM (2008) 30 final: 6), which works well for the need for fairness and transparency. However, as the ETS, in 2008, only covered half of the necessary reductions in greenhouse gas emissions, additional action was also necessary. According to the white paper, “some of this would be driven by EU measures – like tougher standards on CO2 emissions from cars and fuel, and EU-wide rules to promote energy efficiency – but otherwise Member States would be free to determine where to concentrate their efforts, and what measures to bring into play to leverage change” (COM (2008) 30 final: 7). Member states are thus able to meet strict standards in the most *efficient* way possible. This idea is further visited when *flexibility* is considered below.

*Differentiated obligations* take into account differences in capacity via the funding mechanisms outlined in the brief overview of EU history. The Financial Instrument for the Environment (LIFE) was established to co-finance environmental

objectives. Members who lack financial capacity receive grants, which are bound directly to climate-related efforts. Rather than simply receiving general funding, less developed countries receive targeted technical assistance.

### ***Explanations***

The UNFCCC has no history of a system to manage variation in capacity, whether financial or technical. The EU, on the other hand, relies on pooled resources. The Maastricht Treaty, which formally established the European Union, made two important moves that figure prominently in a discussion of institutional effectiveness. The 1993 treaty “assuaged the concerns of poorer member states by allowing temporary derogations and authorizing the Cohesion Fund to compensate them for environmental measures with disproportionately high costs” (Dinan 2010). Between 1961 and 2001, the European Union has made \$324 billion in development grants to decrease economic, social, and environmental disparities (Anderson and Cavanaugh 2004). Pre-1992, funding mechanisms included: the European Regional Development Fund, the European Social Fund, the Cohesion Fund, the European Agricultural Fund for Rural Development, the Competitiveness and Innovation Framework Programme, the European Fisheries Fund and the Seventh Framework Programme. All were used to cover environmental discrepancies that necessitated additional funding. In 1992, the Financial Instrument for the Environment (LIFE) was established to co-finance environmental objectives, specifically. An updated version, LIFE+ cites its general objective:

“To contribute to the implementation, updating and development of Community environmental policy and legislation, including the integration of the environment into other policies, thereby contributing to sustainable development. In particular, LIFE+ shall support the implementation of the 6th EAP, including the thematic strategies, and finance measures and projects with European added value in Member States.” (Regulation (EC) No 614/2007: Article I)

LIFE, and its current iteration, LIFE+, also demonstrate acknowledgement that joining countries will often have either higher or lower standards than the EU. With Sweden and Finland, both members since 1995, the former was the case. The EU allowed them to maintain their high standards, with the understanding that the region-wide standards would soon rise to meet their level. Indeed the aforementioned 1987 Single European Act and Maastricht Treaty specifically included a “policy of *upward harmonization* for health safety, and environmental regulations...and a general EU objective of environmental protection based on preventive action, reduction of damages at their source, and the ‘polluter-pays principle’” (Runge 1994: 36). The Amsterdam Treaty reinforced this decision, making clear that these exceptions were only valid if “proposed national measures were based on new scientific evidence and the problem was specific to the country proposing the exceptional measures” (Dinan 2010). The measures represent a key recognition of the need for flexibility and, at times, *differentiated obligations*. Indeed, “the Commission increasingly focuses on more *flexible* and less harmonization-

oriented regulatory concepts, which allow the member states greater room to maneuver” (Knill and Liefferink 2007).

Central and Eastern European enlargement represented the opposite end of the spectrum. The EU started providing financial assistance to help the prospective new member states reach the high environmental standards in the 1990s. Notably, “the aid was sometimes conditional on the applicants taking certain steps, such as developing waste management plans” (Dinan 2010: 456). Bringing laggard states up to speed was thus largely a carrot-oriented approach. The prospect of economic benefits from integration, paired with specific funding, provided Central and Eastern European countries with an incentive to drive their environmental standards *up*. I argue that this is one of the most critical factors of EU success in environmental policymaking. Countries, out of a desire to receive the ample benefits from free trade, are willing to accept environmental requirements. The *capacity* issue is then directly addressed via financial incentives *and* technical assistance. This is a prime example of common yet differentiated obligations, and signals the strength of positive linkage (Mitchell and Keilbach 2001). By addressing capacity, and institutionalizing upward harmonization (Runge 1994), the EU goes against the typical ‘race to the bottom’ theory associated with trade and the environment. Through deep integration and carefully drafted agreements, the EU has established its ability to drive environmental standards *up*.

It is also important to note that, while the UNFCCC/Kyoto Protocol exempted developing countries from binding reductions, the EU included all relevant actors. The obligations under the EU plan are, therefore, common. The differentiation is

expressed in terms of how high the reduction targets are set, and compliance is augmented with funding and technical assistance. The UNFCCC/Kyoto Protocol does not, in effect, have “common but differentiated obligations”. There are common goals, but the legal force of the actual *obligations* does not extend beyond the Annex I countries.

## **Information and Flexibility**

### ***UNFCCC***

The Preamble to the Convention notes, “that there are many uncertainties in predictions of climate change, particularly with regard to the timing, magnitude and regional patterns thereof” (UNFCCC Preamble). The UNFCCC and Kyoto Protocol do well to attempt to mitigate uncertainty by largely basing its action on information gleaned from regular reports from the Intergovernmental Panel on Climate Change (IPCC). The IPCC was created to provide the global community with scientific knowledge about climate change, and proves successful at doing just that. Indeed, the EU uses information from the IPCC as its main source.

Article 6 of the UNFCCC, ‘Education, Training and Public Awareness’, asserts the need for public dissemination of information, and another proposed obligation seems to be geared at the issue of scientific uncertainty and *information* sharing: “promote and cooperate in the development, application and diffusion, including transfer, of technologies, practices and processes that control, reduce or prevent anthropogenic emissions of greenhouse gases not controlled by the Montreal



Protocol in all relevant sectors, including the energy, transport, industry, agriculture, forestry and waste management sectors” (UNFCCC Article 4:1c). The need for education and technology is reiterated in Article 5, which aims to enhance “international and intergovernmental efforts to strengthen systematic observation and national scientific and technical research capacities and capabilities” (UNFCCC Article 5), and again in Article 9, which establishes a subsidiary body for scientific and technological advice.

*Flexibility* is vaguely referenced in relation to offering states leeway in the implementation phase:

“In the implementation of their commitments under paragraph 2 above, a certain degree of flexibility shall be allowed by the Conference of the Parties to the Parties included in Annex I undergoing the process of transition to a market economy.” (Article 4: 6)

The lack of flexibility mechanisms became an earnest focus when the COP drafted the Kyoto Protocol. Emissions Trading, the Clean Development Mechanism (CDM), and Joint Implementation (JI) make up the arsenal of flexibility-enhancing provisions. The trading scheme allows for trade of emission permits between Annex I countries, the CDM, described earlier, allows for emission reduction projects in developing countries, and JI lets Annex I countries gain credit for projects in other Annex I countries. The mechanisms are designed to allow parties to meet their targets in the most efficient way possible. However, in practice, they may have “generated confusion at best and opened up opportunities for manipulation at worst” (Young 2010: 96).

Whether or not the flexibility mechanisms of the global climate regime prove adequate, it is clear that *institutional flexibility* is not properly accounted for. Indeed, we see the UNFCCC struggling to remain relevant. With scientific uncertainty and sudden changes possible, an adequate climate regime can be neither rigid nor incremental (Young 2010: 86). Article 15 (Amendments) institutionalizes the general lack of flexibility:

“The Parties shall make every effort to reach agreement on any proposed amendment to the Convention by consensus. If all efforts at consensus have been exhausted, and no agreement reached, the amendment shall as a last resort be adopted by a three-fourths majority vote of the Parties present and voting at the meeting.” (UNFCCC Article 15: 3)

Article 20: 3 of the Kyoto Protocol mirrors the text of Article 15:3 of the UNFCCC. The preference is that all changes be made by consensus, and only when necessary should the parties resort to a three-fourths majority vote. Attempting to reach a consensus among 192 parties with divergent interests results in a rather rigid institution. Indeed, “The biophysical systems in question are dynamic and prone to fast changes, but the regime in place is sluggish and cannot respond adequately to shifts” (Young 2010: 116).

## ***EU***

In direct response to uncertainty, the EU has recognized the need for widespread *information* dissemination. Indeed, the 2008 plan included the creation of a Shared Environmental Information System (SEIS) (COM (2008) 46 final). Unlike

the UNFCCC's vague mention of information sharing (UNFCCC Article 6), the EU created a concrete mechanism that takes into account: "common criteria like accuracy, validity, reliability, timeliness, relevance, completeness, comparability and coherence over time are relevant to all environmental information" (COM (2008) 46 final: 1).

The 2008 package also enhanced the key *flexibility* mechanism of the EU's climate action plan. The Emission Trading System, originally initiated in 2005, was successful but suffered several key challenges. Demonstrating the institution's ability to adapt, the new legislation expanded the scope of the trading scheme to include "greenhouse gases other than carbon dioxide" and "all major industrial emitters" (COM (2009) 147 final: 6). Indeed, the Emission Trading System (ETS), prompted by the trading mechanism authorized under the Kyoto Protocol, is one of the most promising features of the EU's climate action program. According to a study commissioned by the European Parliament:

"Recent experience in using market-based instruments in environmental policy has demonstrated their ability to improve environmental performance in a cost-efficient way. Climate-related MBIs could also be effectively implemented in the context of trade policy, provided the appropriate institutional and legal frameworks are put in place."

(EXPO/B/INTA/2007/12: 2)

By using market-based instruments, the EU is able to minimize the costs associated with reducing emissions. Indeed, "the Commission estimates that without the ETS costs to achieve Kyoto emission reduction targets could reach €6.8

billion annually. However, through the ETS, reduction targets can be achieved at an annual cost of €2.9 to €3.7 billion” (MEMO/06/452, 2006: 7). Indeed, strikingly, the EU has framed climate change policy as an opportunity for economic *growth*, rather than burden. The 2008 white paper “20 20 by 2020” includes the assertion that “change offers a stepping stone to modernize the European economy, orientating it towards a future where technology and society will be attuned to new needs and where innovation will create new opportunities to feed growth and jobs” (COM (2008) 30 final: 2). It goes on to note “a real potential to make climate-friendly policies a major driver for growth and jobs in Europe” (COM (2008) 30 final: 3). An emphasis is placed on the number of jobs associated with renewables and energy efficiency in both building and products. The focus on ‘eco-industry’ seems to drive the push to enact climate policy quickly and fully. This is fitting with the basic premise of the European Union: deep integration can benefit everyone.

The EU’s ability to adapt is not limited to its intelligent and palatable framing of policies. The institution itself has proven able to respond to the sometimes-unanticipated changes associated with climate change. Indeed, in addition to the official flexibility mechanisms, like the ETS, the EU itself has shown its ability to be a flexible institution. There is already effort going into planning how to move beyond a 20% cut in reductions (COM (2010) 265 final). And, on February 8<sup>th</sup> of 2013, the EU agreed to commit at least 20% of the entire EU budget from 2014-2020 to climate-related spending.

## ***Explanations***

The argument could be made that cooperation and information sharing is easier to foster among *homogeneous* groups. Liberal states are considered more supportive of international institutions, and more apt to place a higher demand for environmental regulation (Raustiala and Victor 1998). In addition, epistemic communities are easier to establish among countries that share a particular, socially constructed, view of science (Jasanoff 1998). Is “a zone of collective management, marked by shared environmental problems and shared preferences for managing those problems” a natural result of small-scale management? (Raustiala and Victor 1998: 691). Regional institutions are ideal breeding grounds for epistemic communities. With a malign problem rife with scientific uncertainty, information and practice sharing is critical. Indeed, “epistemic communities have a larger role in world politics when there are complex problems with ambiguous linkages and outcomes” (Zito 2002, 243).

Members of regional blocs are likely to have similar preferences, and thus could be strong conduits for policy diffusion. If Simmons et al are correct, “international policy diffusion occurs when government policy decisions in one country are systematically conditioned by prior policy choices made in another country (sometimes mediated by the behaviour of international organizations or even private actors or organizations)” (Simmons et al 2006: 787). Regional trade agreements may facilitate such systematic conditioning, and, more importantly, do so in a context that holds *proximity* constant as it creates a strong epistemic community (Greenhill 2010). By creating communities focused on learning and

cooperation, rather than competition and coercion, regional trade agreements may be uniquely fitted to driving environmental standards *up* (Elkins and Simmons 2005).

The flexibility embedded in the EU relies, in part, on a small number of actors. The UNFCCC made clear that coordinating action to manage a problem with asymmetric externalities at a global level was complicated at best, impossible at worst. With 195 parties to the UNFCCC, and consensus or three-fourths voting the only options, it quickly becomes clear that changes will not come easily. The EU, and regional agreements more generally, benefit from relatively small sets of actors. To compare, the UNFCCC currently has 195 parties, the EU only 27. Institutional design theory tells us “large numbers raise questions about how to share both the costs and benefits of cooperation, especially when some actors are richer, bigger, or more powerful than others” (Koremenos et al 2001: 765). Actors will not act collectively unless the group is small or has selective incentives (Olson 1965, 1982). Aside from being a smaller sample of interests, the close proximity of member states in regional agreements yields greater possibilities for shared incentives. Indeed, trans-boundary pollution is a more tangible concept when you share a border with the polluter (or upstream) state. Information sharing is also easier, particularly when there is a pre-existing network in place. EU countries are used to constant communication, making dissemination easier and allowing for greater ease when transmitting institutional changes.

Had the EU not used flexibility mechanisms, such as the ETS and allowance of different methods to achieve emission reduction goals, participation in the climate

regime might have proved too costly for a number of the newer member states. Both formal flexibility mechanisms such as the ETS, and institutional flexibility are built into the EU framework.

## **Leadership and Linkage**

### ***UNFCCC***

As mentioned above, Article 3 asks developed countries to serve as leaders: “the developed country Parties should take the lead in combating climate change and the adverse effects thereof” (UNFCCC Article 3: 1). Its reference to *leadership* is correct, yet no country has yet filled the role of ‘leader’. It is clear that, despite the positive intentions, all developed countries will not come to the fore to fill this role. Indeed, it is not logical for *all* to serve as leaders. Strong domestic push for environmental politics, capacity, and power may lead a state, or group of states, to act as a hegemon (Young 1991). Among the 195 parties to the convention, we do not see a clear leader.

I argue that the nature of the UNFCCC may preclude coherent linkage. There are currently 195 parties to the convention. Coordinating an institution that a) has clear operational goals and b) appeals to all signatories is inherently difficult when the number of actors is high (Koremenos et al 2001, Olson 1968). In theory, all parties *do* have a vested interest in ‘solving’ the problem of climate change. However, I argue that, in the face of asymmetric costs and benefits, that does not account for a great enough expression of shared incentives. The parties rely on each

other to differing degrees and may not see that aiding others is in their best interest. This idea becomes clearer in the analysis of the EU, where linkage to more benign issues (Underdal 2002a), or positive linkage, (Mitchell and Keilbach 2001), is strong.

The Kyoto Protocol did not improve the lack of leadership. However, it did work to enhance the sense of a community of shared interests, and incorporated the idea of positive linkage via its flexibility mechanisms. The CDM established a direct link between developed Annex I countries and developing. By giving Annex I countries credit for projects outside of their borders, the Kyoto Protocol reflects the global nature of the problem structure at hand. In addition, these projects are intended to increase economic growth *and* reduce emissions in developing countries. However, this top-down approach, and the fact that developing countries do not have binding targets, makes it challenging to create a coherent sense of community challenging. The actors who *have* signed differ greatly in how much they want to, and will, contribute to a solution. In addition, the refusal of countries who, perhaps, do not perceive themselves as victims, to ratify signals that all actors do not see the protocol as mutually gratifying. In order for positive linkage to function, all actors must feel that they will be better off with the treaty than without it *or* have an alternate incentive to join (Miles 2002: xiv).

## ***EU***

The focus on growth and jobs is apparent in a variety of papers, and emphasizes *linkage* to more benign problems. The 2007 green paper on adaptation points out “adaptation actions must be consistent with mitigation actions and vice



versa. These are also necessary to secure the benefits obtained from the Lisbon strategy for growth and jobs” (COM (2007) 354 final: 3). The corresponding white paper furthers this goal: “Enhancing the EU's resilience to the impacts of climate change also means the chance to invest in a low-carbon economy, for instance, by promoting energy efficiency and the uptake of green products” (COM (2009) 147 final: 3). By 2010, “There is now a widespread consensus that the development of resource-efficient and green technologies will be a major driver of growth” (COM (2010) 265 final: 4). I argue that this framing is consistent with the original impetus of the EU, from the first days of integration as the European Coal and Steel Community. Economic interdependence serves as a rationale to enact powerful environmental policies. And while leaders like Sweden and Norway may jump at climate action due to a fundamental interest in ‘greening’ the environment, laggard states such as Spain and Ireland might find the prospect of economic growth more appealing.

According to the EU’s Climate Action Directorate General, “climate mitigation and adaptation actions will be mainstreamed into all the major EU programmes, in particular cohesion policy, energy and transport, research and innovation and by greening the Common Agricultural Policy” (*Climate Action in the EU Budget*). EU documents have continuously shown recognition that climate change is not a separate policy; it is one that must be integrated into all community actions. A 2012 memo concerning the New Environment Action Programme builds on this approach: “past programmes tended to focus on specific environmental issues in isolation. The new approach is to consider how these issues are inter-related and

how improvements in one area can deliver multiple benefits not only for the environment but also for the economy and society” (MEMO/12/908, 2012).

### ***Explanations***

As stated above, with varied interests vying to compete in the UNFCCC, shared incentives are difficult to foster. While all countries may want to deter climate change, they have different costs and benefits associated with doing so. In addition, the sense of positive linkage created by the UNFCCC/Kyoto Protocol does not go as deep as that of the EU. In the EU, the desire to participate and comply has been driven by *linkage*: the perceived economic benefits of joining the bloc. While the flexibility mechanisms of the Kyoto Protocol, most notably CDM, seek to increase efficiency, in Annex I countries, and growth, in developing countries, the regime as a whole is not framed as a source of economic progress and further integration. Some countries, taking issue with the structure of agreement and the lack of full participation, refuse to join. Yet in the EU, defection is not a possibility.

It is necessary to note that, in the EU, the entire set of unilateral goals would not have been possible without full participation. Rather than exempt some members, the EU drew upon the funding made possible by the RTA itself to make sure that all relevant perpetrators were included. Designing an institution that includes all actors relies in part on *linkage*. Indeed, the EU “has a very deep set of linkages between integration and sustainable development” (Gallagher 2009: 295). Linkage in the EU climate change plan functions in two main ways. First, on a structural level, environmental protection must be integrated into a country’s

national policies in order for it to become a full member. It is thus inextricably linked to the EU as a whole. Second, the EU has framed climate change mitigation and adaptation policy not as a burden, but as a path to economic growth. Paired together, the two ensure that each member state will have the capacity *and* the desire to contribute to climate change progress.

In terms of structural linkage, it is clear that the preferences of powerful states, their domestic constituencies, and the level of economic integration matter (Vogel 1997). Deep integration, as in the European Union, means that nations who act as leaders can convince their trading partners to strengthen their environmental policies. I argue that leader states can capitalize on the economic incentives present in trade agreements to drive environmental standards up. The role of leadership thus hinges on the ability to deliver a material good. Indeed, it has been argued that the key condition that powerful countries use to lure weaker ones into protecting their environment is access to the powerful countries' markets (Steinberg 1997). The EU functions on the basis of a full 'acquis communautaire'. Member states, new or old, must incorporate the full set of EU directives into their national legislation. Therefore, laggard states that want to join the EU in order to enjoy the economic benefits must enhance their environmental regulations. Indeed, "the relatively less well-off European countries have improved their social and environmental situations while benefiting economically from integration" (Gallagher 2009: 295).

The linkage utilized in the palatable framing of climate change action is just as significant. In the EU, unlike in the UNFCCC, we see the idea of environmental protection consistently paired with economic growth; a strikingly palatable framing,

the 'sustainability frame' (Lenschow and Zito 1998). EU directives and progress plans consistently reiterate that a low-carbon society yields benefits, *not* burdens; "there is now a widespread consensus that the development of resource-efficient and green technologies will be a major driver of growth" (COM (2010) 265 final: 4). The 'sustainability frame' capitalizes on structural linkage: member states are already invested in the economic health of the region as a whole. This is a key component of the managerial model of institutional management: there must be a starting assumption that the endeavor is a common enterprise (Chayes, Chayes, and Mitchell 1998: 49).

## CHAPTER IV

### STATES AND STRUCTURES

The UNFCCC and Kyoto Protocol have key successes, outlined above, but I argue that three main features are either absent or weak: *linkage, enforcement, and flexibility*. Young, focusing on the alignment of endogenous and exogenous factors in his assessment of the ‘misfit’ of the current climate regime, states that “what we face today is a problem featuring nonlinear and often unpredictable changes coupled with a regime that is sluggish and lacking in the nimbleness needed to address these changes” (Young 2010: 107). Treaties, like the environment, cannot be seen as static. Indeed, the “cure must match the disease” (Underdal 2002b: 469).

Although the UNFCCC *does* address *leadership, information, differentiated obligations, monitoring, and transparency*, I argue that it does not go far enough. The clear main issue with the UNFCCC was the lack of concrete operational goals. Numerous studies have already noted that specific obligations make compliance more likely (Chayes and Chayes 1992). Clear commitments translate into specific actions, flexibility can allow for deep cooperation while minimizing the fear of retaliation (Koremenos et al 2001), and “learning by doing” (Victor and Skolnikoff 687) can lead to innovative changes. The Kyoto Protocol recognized the lack of strict obligations, and made emission reduction targets binding. However, the lack of strong enforcement and “common but differentiated obligations” weakened the impact.

Here it is important to note the distinction between structural realities of the two institutions and strong policymaking. The EU did not *choose* to have strong leadership and a small number of actors, nor did the climate change regime involve an ad-hoc creation of deep political and economic integration. However, the decision to enact broad unilateral goals *was* a choice that, in effect, was made viable by its structural reality. The global climate regime could not rely on a small number of actors. In order to create a successful international agreement, it needed to include all perpetrators (Miles 2002: xiii). The UNFCCC and Kyoto Protocol had to work within the confines of the fragmentation of international society. However, there *were* choices, for example, the decision to not make binding reduction requirements for developing countries. Below, I attempt to distinguish between structure and policymaking.

It is clear that key features have consistently shaped environmental policy in the European Union, most notably: *strong leadership*, *differentiated obligations* (acknowledging capacity limitations), and *flexibility*. In addition, desire to participate and comply has been driven by *linkage*: the perceived economic benefits of joining the EU. I have established that the EU has all of the institutional features that I previously deemed necessary for the management of a malign problem. With incentives to take no unilateral action without global consensus to do the same, why does the EU develop a highly functional institutional response? While the UNFCCC/Kyoto Protocol and the EU were faced with the same malign characteristics, the former has struggled to develop the institutional strength necessary to enact meaningful change.

What the UNFCCC/Kyoto Protocol lacked (*linkage, enforcement, and flexibility*), the EU embraced. In order to attempt to understand why, I consider two levels of explanations: state-based, and RTA. The former is a more nuanced formulation of the idea that rich countries with green politics want to contribute to climate change progress. The latter, RTA-specific, argument suggests that the deep level of cooperation seen in the policies outlined above would not have been possible without a strong history of economic and political integration. As stated above, I work to determine whether the successes of the EU are a result of structure or adept policymaking. I then ask whether the institutional-level features of the EU are specific to the region, or whether they have the potential to be considered in other RTAs.

### **European States**

The political and economic environment in the EU cannot be discounted; “all international politics has domestic roots” (Koremenos et al 2001: 1070). Strong climate action in the EU is, in part, a result of domestic politics, public opinion and economic capacity of certain member states (Vogel and Kessler 1998). Indeed, culture, economy, and leadership matter (Brown Weiss and Jacobson 1998). The bottom-up approach suggests the need to consider that “the development of international environmental regimes most likely mirrors this positive shift in basic values, policy priorities, and institutional capacity at the domestic level—although probably with some time lag” (Underdal 2002b: 439). While I reject the reductionist assumption that green, well-off states will necessarily unilaterally address climate

change, these aspects *do* play a role. I determine which of the necessary institutional features are exogenous, or more related to the characteristics of EU member states and focus on two key aspects: *leadership and economy*. While important factors, I argue that neither could be considered, whether on their own or as a group, the ultimate cause of EU climate policy. Indeed, leadership is necessary but not sufficient (Young 1991) and wealth only came into play when it was pooled and distributed *by* the institution.

*Leadership* has always been an important aspect of environmental policymaking in the European Union. As explained above, Germany, the Netherlands, and Denmark (the green troika) took the initiative to push the environment to the forefront of the Single European Act in 1987. Sweden, Norway, and Germany led the fight for acid rain legislation. Indeed, “faced with the numerous potential hurdles of the EU process, any effort at policy innovation requires leadership on the part of actors” (Zito 2002:243). Denmark and the Netherlands, states with traditions of using economic instruments in their environmental policy agendas, initiated carbon taxes in 1992 (Zito 2002: 246). While at first the Commission wanted the Dutch and the Danes to drop the taxes, they ultimately decided that the best way to prevent disruption of the EU market was to put in place a EU-wide carbon tax. This is consistent with the general principle, established under the Maastricht Treaty, that policies should harmonize *upward* (Runge 1994). However, upward harmonization requires entrepreneurial member states to drive their own standards up, revealing “the central role of national governments and their articulation of specific interests in the process” (Zito 2002: 252). The carbon



tax demonstrates that a “unilateral policy choice made by the strong actor alters the structure of opportunities facing other societies” and “may generate and strengthen domestic demands within weaker nations for making adaptive adjustments in their own policies” (Underdal 2002a: 30).

The last point attributed to characteristics of the member states themselves is *economy*. Climate change mitigation and adaptation is a costly endeavour, with uneven distribution of costs and benefits. Indeed, financial capacity must play a role. The Kuznets curve suggests that as a country’s economy grows, so will demand for environmental protection (Grossman and Krueger 1993). With material concerns out of the way, wealthy liberal states have the time, and capacity, to care about the natural world. However, as mentioned above, the EU is no longer a coalition of rich, green countries. Enlargement has meant greater asymmetries, both economically and politically. In this context, the EU has responded with financial support for less well-off countries. Indeed, fulfilling the desires of leaders sometimes requires paying the participatory costs of developing states (Raustiala and Victor 1998). The history of pooling common resources made the necessary differentiated obligations of the EU climate regime possible.

### **European Union and Regional Trade**

As is evident in the analysis above, leadership and economy cannot be credited with single handedly resulting in unilateral EU action. Indeed, they require an institution in order to be effective. I argue that key institutional characteristics were made possible by the regional, and trade-oriented, institution: *information*,

*differentiated obligations, flexibility, monitoring/enforcement, and linkage.* By keeping the number of actors small, establishing shared incentives, and mainstreaming economic and political integration, the EU demonstrates that the institution, not the characteristics of the individual states, made a coherent climate change regime possible. Indeed, the structure of the RTA itself facilitated cooperation by taking advantage of pre-existing linked incentives. These features are *not* lessons in institutional design; rather, they suggest that capitalizing on pre-existing structures can result in more coherent policy.

I argue that it is the strength of the idea that economic integration would support political peace and cooperation that led the EU to eventually include environmental policy. The origin of the EU dates back to the 1945 formation of the European Coal and Steel Community (ECSC). The arrangement arose out of a tumultuous economic and political situation post-World War II. There was a need to establish a coherent policy towards Germany, facilitate reconstruction and recovery, and enhance regional security. Coal had long been a vital resource for the recovery of industry, and France, committed to modernization, needed stable access. Germany needed forgiveness, and reintegration. The 1950 Schuman Plan, masterminded by Jean Monnet, gave both what they wanted. Using economic mechanisms, policies, and institutions, the plan set the stage for lasting integration. The logic is directly relevant to the question of what a regional trade agreement can offer. Logistically, the ECSC meant a common market in coal and steel that drove economic growth and promoted competition. However, it did much more. Jean Monnet envisioned *deep integration* that would eventually blend into other sectors

of society. Most importantly, it established a precedent of supra-nationality (member states agreed to cede some of their sovereignty to a 'High Authority') and made clear that there would be a foundation of *shared incentives and linkage* (Dinan 2010:4, 19).

Prior to the 1970s, the EU had almost no environmental policies to speak of. Jordan describes that a "trickle of legislation turned into a stream" during the 1980s (Jordan 2002). The First Action Program was approved in 1973, with the goal of improving "the setting and quality of life, and the surroundings and living conditions of the Community population" (Hildebrand 2002). The Second, in 1976, expanded on the first, emphasized rational use of the environment, and prioritized reduction of water pollution. The Third fully incorporated the values of the former two into all Community objectives, and formally established the environmental impact assessment procedure, along with concrete directives. By 1987 the Fourth Environmental Action Program, under the Single European Act, had established harmonization across the member states and essentially granted the European Commission power to regulate the environment under the "polluter-pays" principle (Holzinger et al 2009: 49). These steps are crucial, given that eliciting compliance requires a foundation of norms (Chayes, Chayes, and Mitchell 1998).

The Maastricht Treaty of 1993 furthered the goals of the Single European Act. It aimed to further sustainability and maintain high levels of protection. To reach this goal, the treaty required that policy use the precautionary principle, ensuring that preventive action should be taken to protect the environment. As established in the Third Environmental Action Program, environmental protection requirements

had to be integrated into all other Community policies (Wilkinson 2002). Although there was pushback against centralized environmental policy throughout the 1990s, the 1997 Amsterdam Treaty solidified the region's commitment to the environment by formally introducing the idea of sustainable development. The environment was thus inextricably bound to what had been stipulated as an economic arrangement.

Proximity and number alone do not lead to a functional institution. Economic and political integration lie at the heart of the EU's successful institutional design. The depth of integration, in part, allowed the EU to enact ambitious, legally binding, climate goals. However, such a statement would suggest that any regional trade agreement, bound by economic and political linkage, could do the same. Here I turn to policies that distinguish the EU from other RTAs. The historical account of EU integration makes clear that strong funding mechanisms were a key component of enlargement. Central and Eastern European countries received assistance even before they were official member states. The goal was to help potential joiners, who were crippled with incapacity, reach the high EU standards.

We see this rationale carried into the climate change program. Had the EU not used flexibility mechanisms, such as the ETS and allowance of different methods to achieve emission reduction goals, participation in the climate regime might have proved too costly for a number of the newer member states. Both formal flexibility mechanisms such as the ETS, and institutional flexibility are built into the EU framework. In addition, laggard states were eligible for funding via LIFE+ and the Cohesion Fund. The institution recalibrated the costs and benefits of climate change cooperation to make possible deeper levels of change. Cooperative practice sharing

and funding arrangements are better suited to issues of noncompliance due to lack of capacity, where, in fact, “coercive sanctions are not only ineffective but inherently unsuitable” (Chayes, Chayes, and Mitchell 1998: 41). In response to the pressure of strong leader states, paired with a system suited to dealing with incapacities, the EU has institutionalized a practice of *upward harmonization* (Runge 1994).

## CHAPTER V

### APPLICATIONS

If the institutional successes of the EU are specific to the region, the structural explanations (the EU got lucky with *leadership* and wealth) win out over the institutional design elements (RTAs facilitate *information sharing, differentiated obligations, flexibility, monitoring/enforcement, and linkage*) argument. If the institutional design elements are available in other contexts, however, the lessons learned here may be transferable to other RTAs. Below I attempt to determine what lessons emerge from the European example that might be generalizable intellectually and transferable in terms of policy to other regions, offering Mercosur as an alternate case study. I consider which aspects are benefits of working within the framework of an RTA and which can be attributed to intelligent policymaking.

The EU has never been a normal trade agreement. Runge points out several unique characteristics: “the EU has addressed the linkages between trade and environment directly, and has been active in setting environmental policies and resolving trade-environment disputes” (Runge 1994: 35). Runge goes on to draw attention to three key institutional characteristics of the EU. First, member countries allow the European Commission to take responsibility for environmental policy, civil protection, and nuclear safety (supra-nationality). Second, the EU has funds to assist member countries with environmental provisions (aiding compliance, and allowing for differentiated obligations). And lastly, EU members are close in proximity and trade at high levels. According to Runge, this “strengthens the case for

greater harmonization, and makes problems of transnational pollution more obvious” (Runge 1994: 36). This third characteristic fits closely with the logic of policy diffusion, which, indeed, suggests that proximity can contribute to the formation of epistemic communities (Greenhill 2010). If the EU is as unique as Runge suggests, are its successes also a rarity?

As established in the section above, certain critical characteristics that made the EU successfully enact unilateral goals may be attributed to its status as an RTA. I argue that four main features are worth examining: *information, differentiated obligations, flexibility, monitoring/enforcement, and linkage*. However, I also consider the possibility that other RTAs will have difficulty replicating the strong leadership and pooling the generous funding that made differentiated obligations possible. It is also important to note that the EU benefited from a relatively long history of integration, and that the idea of ceding sovereignty to a central institution was not new. Here I consider Mercosur as a regional trade agreement that has neither the deep history nor the economic capacity of the EU. It was formed as a vehicle for growth, not, as in the EU, as a system of deep political and economic integration. The goal was to figure out “how the environment can be protected without affecting growth rates and the liberalization of trade” (Tussie 2000: 1). However, I argue that while the economy may have taken front stage, the impetus for environmental protection is still there. Indeed, the preamble states: “believing that this objective must be achieved by making optimum use of available resources, preserving the environment...” (Mercosur: Preamble).

In counter to the claim that “all the environmental components of the agreement are weak, and have even been downgraded in recent years” (Hochstetler 2003: 1), the 1999 near-collapse of Mercosur and the corresponding skepticism about neoliberalism may have created an institutional climate more suited to deep regional integration and regulation that, in turn, may allow more environmental components to be integrated and existing ones to be strengthened. Indeed, the post-1999 iteration of Mercosur seems poised to incorporate several of the key features outlined above. The post-crisis reframing of Mercosur created a powerful opportunity to expand the scope of the agreement and “infuse the organization with a social dimension” (Parton 2011, 135). In 2001, only two years after the crisis, an “Environmental Framework Agreement expanded and specified the environmental aims of Mercosur” (Hochstetler 2003: 13). The preamble signals a heightened commitment to the environment: “considering that trade and environmental policies should complement one another to ensure sustainable development within the Southern Common Market (Mercosur)”, they were “convinced of the importance of a legal framework to facilitate the effective protection of the environment and the sustainable use of natural resources by the States Parties”(Environmental Framework Agreement; Preamble). In 2004, the Specialized Meeting of Environment Ministers was established. That same year, the Common Market Council adopted Decision 14/04: “the Additional Protocol of the Mercosur Framework Agreement on the Environment in the field of cooperation and assistance in the event of environmental emergencies”.



The recent history outlined above suggests that the political bodies of Mercosur “have demonstrated a capacity to forge regional norms and enhance economic integration” (Parton 2011: 133). However, the intergovernmental focus and resistance to ceding sovereignty undercuts some of the ability to coordinate regional cooperation (Parton 2011, Hochstetler 2003). I argue that climate change progress at the regional level is likely to be challenging, but not impossible. Indeed, all the Mercosur member states have signed the Kyoto Protocol, and developed an *Ad hoc* Group on Climate Change (GAHCC) (Red Mercosur WP N° 3-2010, 12). Yet it is clear that more work needs to be done. Mercosur, because of the structure inherent to an RTA, is embedded with shared incentives, at least at the economic level. In addition, the move away from neoliberalism and corresponding call for more state intervention and an enhanced focus on social cohesion opened up political space for Mercosur to broaden its scope (Phillips 2001).

If the inherent structure of regional trade agreements, exemplified by the EU, lends itself to binding obligations, their treatment of climate change needs more careful analysis. Here I note that, as shown above with the case of Mercosur, economic integration may be necessary, not but sufficient, for strong institutional design. The *linkage* to economic growth is clear, as is the ability to distribute *information* via pre-existing networks. *Differentiated obligations* prove more challenging to replicate, as they require a central mechanism capable of distributing assistance (financial *and* technical). The EU had this for two main reasons: 1) member states agreed to cede some amount of sovereignty to the institution and 2) some countries were wealthy enough to generate a more than adequate quantity of

structural funds for the less wealthy. The first is transferrable to other cases if the actors concede; the second is not always. Mercosur does not have the financial capacity necessary, nor would the environment be a likely top concern. Different stages of development reflect different priorities.

*Flexibility*, as described earlier, is necessary on two levels: flexibility mechanisms and institutional flexibility. I argue that, while the former requires coherent policymaking, the latter may be built into successful RTAs. The EU and the Kyoto Protocol both include emissions trading in an effort to allow countries to meet reduction targets as efficiently as possible. While not inherent to the structure of the RTA, the institutionalized trade relations should, in theory, make the establishment of an emissions trading system easier. Institutional flexibility should, likewise, be less challenging within the framework of a trade agreement. Trade relations require constant change, due to regular evaluations of barriers to trade and shifting situations of political economy among the member states. In theory, this argument should also lend itself to efficient monitoring/enforcement. Trade partners require institutional *transparency*, and regular reporting of tariff levels is the norm. However, requiring states to comply with environmental rules also requires a deep level of political integration. The full 'acquis communautaire' of the EU is not found in Mercosur. Member states still interact on an intergovernmental level, and maintain a high degree of autonomy.

It is clear that there is no deterministic link between regional trade agreements and successful climate change regimes. I argue that there is a need for a strong institutional foundation, economic capacity to include a system of

management that acknowledges divergent levels of capacity, and willingness to allow a central body to maintain a moderate degree of authority. However, *linkage* and *information sharing*, two necessary institutional features are embedded in RTAs. In addition, *differentiated obligations*, *flexibility*, and *monitoring/enforcement* should be easier to foster when there is already a history of economic integration and shared incentives. The EU's financial mechanisms allowed for the transfer of funds, and technical assistance, to member states with limited capacity. The development of a common market necessitated monitoring and enforcement. And maintaining an institution that managed political and economic shifts contributed to a flexible framework. More research is needed to determine if these features could be effectively fostered in another region.

## CHAPTER VI

### CONCLUSIONS

Climate change is plagued with the *fear of free riding, asymmetry, scientific uncertainty, and inherent interdependencies* (Miles et al 2002, Rittel and Webber 1973, Levin et al 2012, Lazarus 2009). An institution properly fit to mitigate such malign characteristics requires key features: *leadership, linkage, quality information, differentiated obligations, monitoring/enforcement, transparency, and flexibility* (Miles et al 2002, Koremenos et al 2001, Brown Weiss and Jacobson 1998). I use the UNFCCC/Kyoto Protocol and EU as lessons in institutional dynamics. An analysis of the relative successes and failures of each suggests that coordination within a regional trade agreement may facilitate deeper progress. While I do not suggest that RTAs can serve as a substitute for global cooperation, they *may* be able to make valuable contributions to the overall “regime complex” that attempts to mitigate the harmful social and environmental impacts of climate change. Indeed, “regional organizations at their core are institutionalized means of enhancing cooperation amongst nation-states” (Parton 2011, 134).

When faced with the same problem structure, a global regime (exemplified here by the UNFCCC and Kyoto Protocol) developed a different breed of institution than that championed by a regional counterpart (represented by the EU). The UNFCCC, and the Kyoto Protocol that followed, suffer from structural obstacles: an unwieldy number of actors, splintered interests, and institutional rigidity. In spite of these challenges, the global climate regime has succeeded at transmitting scientific

information and incorporating flexibility mechanisms. Reports from the IPCC have fundamentally shifted the global body of climate change knowledge, and have informed the policymaking decisions of the EU. However, it has fallen short on other fronts. All relevant actors are not included, the obligations may be *too* differentiated, those countries that have ratified are falling short of their reduction targets, and there is confusion as to where to go next. Choosing to not include developing countries in the pact of binding reductions not only alienated countries that perceived the agreement as unfair, but also did little to acknowledge the financial and technical capacity issues. The Clean Development Mechanism is fraught with the risk of fraud and exploitations. While the strong incorporation of *information* and *flexibility mechanisms* is a testament to international cooperation, I find the global regime lacking in *linkage, enforcement, and flexibility*.

Coordination at the regional level is, clearly, easier. Regional trade agreements mean that a small number of actors, in relatively close proximity, will have at least some shared incentives due to economic (and often political) integration. This thesis explores the possibility that regional cooperation may benefit from enhanced policy diffusion (proximity, information sharing), linkage to more pressing concerns (the economy), and the enforcement capacity of a centralized institution. I argue that these arrangements have the ability to impact social cohesion, or “the glue that binds society together” (Capshaw, 2005, 53). The EU performs much better than the UNFCCC/Kyoto Protocol in almost all key areas: *leadership, information sharing, differentiated obligations, flexibility, monitoring/enforcement, and linkage*. The pre-existing structure of deep political

and economic integration meant that countries are obligated to comply with the full *acquis communautaire*, which includes climate change policy. And, if capacity is an issue, members are eligible for LIFE funding due to the history of pooling common resources. The institution of the EU, in existence since the early 1950s, is also capable of adapting. The enforcement mechanism has been strengthened, and is supported by the European Court of Justice; the trading system (ETS) now includes all greenhouse gases; climate action has been mainstreamed into all other EU policies; and an information-sharing program (SEIS) was established.

Although these successes are promising, a regional trade agreement does not necessarily include strong climate change policy. The case of Mercosur demonstrates that an intergovernmental focus and resistance to ceding sovereignty undercuts some of the ability to coordinate regional cooperation (Parton 2011, Hochstetler 2003). The strong institutional history of the EU, its *leadership*, and the relative wealth of its countries made strong policymaking much more feasible. However, while certain features may be unique to the EU experience, I argue that many aspects of the EU's institutional design merit further investigation. Some characteristics are inherent to the structure of RTAs (*information, linkage*) and other lessons learned from the EU may be transferrable (*differentiated obligations, flexibility, and monitoring/enforcement*). Leader states can capitalize on the economic incentives present in trade agreements to drive environmental standards up. In addition, countries may be more apt to adopt strict regulations when, in exchange, they receive concrete financial benefits. The EU's style of framing climate change action as a path to economic growth made regulation more palatable. In

addition, access to a free trade area means that a classically laggard state may consider the costs of environmental protection less foreboding when there are anticipated benefits that may be even greater. The research here suggests that the EU successfully recalibrated the distribution of the costs and benefits of acting on climate change. The ability to do so resulted, in large part, from pre-existing institutions.

I do not seek to demonstrate that a regional institution is *better* than the global climate regime. I work to assess whether regional trade agreements can fill in gaps in coordination that are inevitable when one institution attempts to tackle a problem that does not adhere to geopolitical boundaries. A complex global problem with upstream/downstream asymmetries cannot be matched with a single solution. Rather, a *network* of solutions is needed to begin to alter the way countries design and implement meaningful systems of change.

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