

ACTORS, COALITIONS AND
THE FRAMEWORK CONVENTION ON CLIMATE CHANGE

By

GRANVILLE CLARK SEWELL

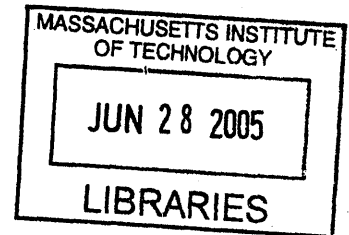
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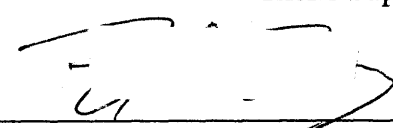
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ABSTRACT

This study examines the political processes through which the Framework Convention on Climate Change was negotiated and the initial efforts of the United States, the Netherlands, and Japan to adopt national policies and measures to implement it. Using the Advocacy Coalition Framework (ACF) as a theoretical lens, it looks in particular at coalition behavior in the policy processes at the international, national, and sub-national levels, and the nature of cooperation and coordination both within and between these levels. In doing so, it attempts to shed additional light on the capacity and propensity of national governments to implement international environmental agreements.

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SECTION I:
INTRODUCTION
AND OVERVIEW

CHAPTER 1 - INTRODUCTION

Since the Stockholm Conference on the Human Environment in 1972, international treaties have been negotiated on a number of transnational environmental issues, including endangered species, ozone depletion, climate change, and the loss of biological diversity. In each of these agreements, the parties agreed to cooperate in addressing the problem at hand by making changes in their national policies such that these policies are consistent with each other and the terms of the treaty. There is now growing concern that these national policy changes are not being made in any meaningful way. This is particularly true for those agreements, like the Framework Convention on Climate Change (FCCC), for which the required changes are politically difficult or require a certain amount of national self-sacrifice. In 1997, the international community took steps to strengthen the Climate Convention by signing the Kyoto Protocol. Although this agreement will enter into force in February 2005, it is not clear that it will be effective in inducing the requisite changes in domestic policies.

International cooperation has traditionally been viewed as a process in which self-interested states work together to achieve a policy objective they could not each achieve on their own. This cooperation requires that the actions or policies of separate nations be brought into conformity with one another through a process of negotiation. However, cooperation cannot be said to take place until each country regards the policies being followed by the others government as conforming with the objectives that lead them to cooperate in the first place.¹ International regimes and institutions, created through treaties negotiated among sovereign nations, are the mechanisms intended to make this process of cooperation easier.²

One of the difficulties facing the international community in crafting more effective environmental treaties is that the relationship between international agreements and domestic policy change, the essential element of cooperation, is not well understood. A core assumption of most international relations theories is that a nation will only ratify an agreement if it is prepared to make the domestic policy changes necessary to comply with it. Treaty ratification is thus viewed as synonymous with treaty implementation. However, the two are separate political processes. Ratification, in which a national government (generally the national legislature) formally endorses a negotiated agreement, is a commitment by that government to make the domestic policy changes required by the agreement.³ Implementation, however, is the political process through which the government actually carries out the requisite changes in national

¹ Keohane, Robert O. 1984. *After Hegemony: Cooperation and Discord in the World Political Economy*. Princeton: Princeton University Press. Keohane uses Linblom's definition of policy coordination, in which a set of decisions can be said to be .."coordinated if adjustments have been made in them, such that the adverse consequences of any one decision for other decisions are to a degree and in some frequency avoided, reduced, or counterbalanced or outweighed." (Linblom, Charles E. 1965. *The Intelligence of Democracy*. New York: The Free Press).

² A number of definitions of the term "regime" exist (see, e.g., Haggard, Stephen and Beth A. Simmons. 1987. Theories of international regimes. *International Organization* 41, 3: 491). The definition suggested by Krasner is used here, where a regime is the "implicit or explicit principles, norms, rules and decision-making around which actors' expectations converge in a given area of international relations." (Krasner, Stephen D. 1982. Structural causes and regime consequences: regimes as intervening variables. *International Organization* 36, 2: 185).

³ Milner, Helen V. 1997. *Interests, Institutions, and Information: Domestic Politics and International Relations*. Princeton, NJ: Princeton University Press.

policy. Treaty compliance is the recognition by the cooperating partners that national policy changes are being implemented as required by the agreement.

Much of the literature on policy implementation has shown that committing to policy change is quite different than making the changes themselves. As Bardach points out,

“It is hard enough to design public policies and programs that look good on paper. It is harder still to formulate them in words and slogans that resonate pleasingly in the ears of political leaders and the constituencies to which they are responsive. And it is excruciatingly hard to implement them in a way that pleases anyone at all.”⁴

The difficulties that countries encountered in changing national policies to conform to international agreements can be seen in the literature on treaty compliance, which suggests that compliance with international environmental agreements is mixed at best.⁵ For example, Parties to a number of international environmental agreements have been inconsistent in provide reports on policies and measures that they are pursuing to meet the treaty requirements, thus sidestepping an important mechanism for promote compliance.⁶ Many of these agreements themselves lack measurable objectives, such as quantitative targets and technical criteria, against which compliance can be measured.⁷ Many view this lack of measurable objectives as a principle reason why many of these agreements are inadequate for addressing complex global environmental issues, particularly those of climate change and biodiversity.⁸ It is not clear, however, that the delineation of clear objectives will necessarily improve treaty compliance.⁹

⁴ Bardach, Eugene. 1977. *The Implementation Game: What Happens After a Bill Becomes Law*. Cambridge, Massachusetts: MIT Press.

⁵ See, e.g., U.S. General Accounting Office. 1992. *International Environment: Strengthening the Implementation of Environmental Agreements*. Washington, D.C.: United States General Accounting Office; U.S. General Accounting Office. 1992. *International Environment: International Agreements Are Not Well Monitored*. Washington, D.C.: U.S. Congress; Chayes, Abram and Antonia H. Chayes. 1995. *The New Sovereignty: Compliance With International Regulatory Agreements*. Cambridge, MA: Harvard University Press.

⁶ For example, at the third meeting of the Parties to the Montreal Protocol of 1991, it was reported that a majority of states were in effect ignoring regime requirements in that they had either failed to provide any information or had only provided incomplete data (Sand, Peter H., ed. 1992. *The Effectiveness of International Environmental Agreements: a Survey of Existing Legal Instruments*. Cambridge, England: Grotius Publications). The situation was sufficiently poor that by the Copenhagen meeting of 1992, doubts were cast on the viability of the tightened controls agreed at that meeting (Vogler, John. 1995. *The Global Commons: A Regime Analysis*. New York: John Wiley and Sons). In the case of the Framework Convention on Climate Change, only half of the OECD countries required to submit reports in early 1997 had done so as of August 14, 1997, and many of these have been criticized as sloppy and inadequate (Lanchbery, John. Failure to Report? *ECO*, Oct. 21, 1997. pg. 3).

⁷ Vogler. 1995. *The Global Commons: A Regime Analysis*; Sand. 1992. *The Effectiveness of international environmental agreements: a survey of existing legal instruments*.

⁸ See, e.g., Susskind, Lawrence E. 1994. *Environmental Diplomacy: Negotiating More Effective Global Agreements*. New York: Oxford University Press; Mathews, Jessica Tuchman, ed. 1991. *Preserving the Global Environment: The Challenge of Shared Leadership*. New York: W.W. Norton and Company; Thomas, Caroline. 1992. *The Environment in International Relations*. London: The Royal Institute of International Affairs Energy and Environmental Programme.

⁹ For discussions of the problems of compliance and enforcement in the context of current international relations theory, see, e.g., Chayes and Chayes. 1995. *The New Sovereignty: Compliance with International Regulatory Agreements*; Downs, George W., David M. Roache, and Peter N. Barsoom. 1996. Is the good news about compliance good news about cooperation? *International Organization* 50, 3: 379; Downs, George W. and M. A. Jones. 2002. Reputation, compliance, and international law. *Journal of Legal Studies* 31, 1: 95-114; and Nadelmann, Ethan A. 1990. Global prohibition regimes: the evolution of norms in international society.

While nations cooperate in setting policy objectives through the treaties they ratify, it is the formulation and implementation of national policies and measures that ultimately determines whether a treaty succeeds or fails.

Because implementation is so difficult, an understanding of the ways in which nations make policy changes in response to international treaties and the factors that influence this process is crucial to effective cooperation on global environmental issues. This study examines the political processes through which the Framework Convention on Climate Change was negotiated and the initial efforts of the United States, the Netherlands, and Japan to adopt national policies and measures to implement it. Using Sabatier and Jenkins-Smith's Advocacy Coalition Framework (ACF) as a theoretical lens, it looks in particular at coalition behavior in the policy processes at the international, national, and sub-national levels, and the nature of cooperation and coordination both within and between these levels. In doing so, it attempts to shed additional light on the capacity and propensity of national governments to implement international environmental agreements. In the remainder of this chapter, I discuss some of the current literature on treaty compliance and implementation, and introduce the ACF and its application in this study.

1.1 UNDERSTANDING INTERACTIONS AMONG INTERNATIONAL AND NATIONAL POLICY PROCESSES

Up until the late 1980s, explanations of interstate relations were generally categorized according to their "level of analysis," or the units in which the independent variables have been conceptualized.¹⁰ Three levels of analysis have generally been used. International-level (or "systemic") explanations look to a state's position in the international system; domestic-level explanations look to the society, culture, and political institutions of individual states; and individual-level explanations look to the personal or psychological characteristics of individual statesmen.¹¹ These three levels have traditionally been viewed as mutually exclusive, so most attempts to explain such issues as treaty development and compliance have treated the state as a unitary body.¹²

Explanations of treaty compliance derived from these traditional theories have been found to adequately explain only a limited number of problems, and are particularly weak in explaining the political processes involved in addressing global environmental problems such as climate change.¹³ Furthermore, no theory of international relations explains what Putnam has called

International Organization 44, 4: 479.

¹⁰ Moravcsik, Andrew. 1993. Introduction: Integrating International and Domestic Theories of International Bargaining. In *Double-Edged Diplomacy: International Bargaining and Domestic Politics*, ed. Peter B. Evans, Harold K. Jacobson, and Robert D. Putnam, pg. 3-42. Berkeley: University of California Press.

¹¹ Waltz, Kenneth N. 1975. Theory of International Relations. In *Handbook of Political Science: International Relations*, ed. Fred Greenstein and Nelson Polsby, pg. 1-86. Menlo Park: Addison-Wesley; Singer, J. David. 1960. International Conflict: Three Levels of Analysis. *World Politics* 12, 4: 453-461.

¹² Singer, J. David. 1961. The Level-of-Analysis Problem in International Relations. *World Politics* 14, 10: 77-92.

¹³ See, e.g., Moravcsik. 1993. Introduction: Integrating International and Domestic Theories of International Bargaining; Rowlands, Ian H. 1995. *The Politics of Global Atmospheric Change*. Manchester and New York: Manchester University Press; Paterson, Matthew. 1996. *Global Warming and Global Politics*. London and New York: Routledge; O'Riordan, Tim and Jill Jaeger, eds. 1996. *Politics of Climate Change: A European Perspective*.

“involuntary defection,” which happens when a party reaching or supporting an international agreement is unable to sustain commitments because of domestic political constraints.¹⁴ “Defection” in these cases is not the result of calculating unified actors, but the outcome of domestic political conflicts that no single actor can control.

Since the late 1980s, some attempts have been made to integrate these different levels into an explicit theory of their interaction. Most of these have taken a game-theoretical approach, building Putnam’s concept of “two-level games.”¹⁵ While this approach provides a useful framework, even its proponents admit that it does not constitute a theory with testable hypotheses.¹⁶ More recently, Helen Milner has proposed a more explicit framework using rational choice theory and the concept of “domestic polyarchies”, which she uses to examine situations in which an agreement is negotiated but not ratified by domestic legislature.¹⁷ However, she acknowledges that her dependence on rational choice theory presents limitations. It also does not explain situations where a treaty is ratified, but changes are not made in existing national policies to conform to it. It is this situation that is the classic problem of implementation.

1.2 THE ADVOCACY COALITION FRAMEWORK AND CLIMATE CHANGE POLICY PROCESSES

A modified version of the ACF can be useful in explaining the dynamics of treaty implementation, as the units of analysis used in the framework, policy subsystems and advocacy coalitions, can be applied at both the international and national levels of analysis. The ACF portrays the policy process as a function of interactions among competing advocacy coalitions within an issue-specific policy subsystem; changes external to that subsystem; and the effects of system-wide parameters and events on the constraints and resources of the various coalitions. When viewed through the lens of the ACF, treaty implementation is a function of the political dynamics that occur among overlapping international, national and subnational subsystems.

London, New York: Routledge.

¹⁴ Putnam, Robert D. 1988. Diplomacy and Domestic Politics: The Logic of Two-Level Games. *International Organization* 42: 427-60.

¹⁵ See, e.g., Putnam. 1988. Diplomacy and Domestic Politics: The Logic of Two-Level Games; Mayer, Frederick W. 1992. Managing domestic differences in international negotiations: the strategic use of internal side-payments. *International Organization* 46, Autumn: 793-818; Friman, H. Richard. 1993. Side-payments versus security cards: domestic bargaining tactics in international economic negotiations. *International Organization* 47, 3: 387-410; Evans, Peter B., Harold K. Jacobson, and Robert D. Putnam, eds. 1993. *Double-Edged Diplomacy: International Bargaining and Domestic Politics*. Berkeley: University of California Press; Ward, Tony. 1996. Climate change and the National Policy. *Canadian Journal of Economics-Revue Canadienne D Economique*, 1: S344; Iida, Keisuke. 1996. Involuntary defection in two-level games. *Public Choice* 3-4, 89: 283; Mo, Jongryn. 1994. The logic of two-level games with endogenous domestic coalitions. *Journal of Conflict Resolution* 38, Sept: 402-22; Mo, Jongryn. 1995. Domestic Institutions and International Bargaining: The Role of Agent Veto in Two-Level Games. *Review* 89, 4: 914.

¹⁶ Evans, Peter B. 1993. Building an Integrative Approach to International and Domestic Politics: Reflections and Projections. In *Double-Edged Diplomacy: International Bargaining and Domestic Politics*, ed. Peter B. Evans, Harold K. Jacobson, and Robert D. Putnam, pg. 397-429. Berkeley: University of California Press.

¹⁷ Milner. 1997. *Interests, Institutions, and Information: domestic politics and international relations*.

An essential tenet of the ACF is that the fundamental aspects of government programs and policies arising from each subsystem (the “policy core”) reflect for the most part the belief system of the coalition that is able to dominate the subsystem. A coalition’s ability to dominate the subsystem is in turn determined by the political resources it possesses and the political constraints it faces. Because belief systems are very difficult to change, it can be assumed that the “policy core” of a government program in a specific subsystem will not be significantly revised as long as the coalition that instituted the program remains dominant within that subsystem. This also means that policy change is substantially shaped by system-wide events (e.g., changes in socio-economic conditions) and parameters (e.g., social structures and constitutional rules) that affect the resources and constraints of subsystem actors.

One aspect of the ACF that has not been well developed is the relationship between these resources and constraints and coalition dominance. I suggest that looking at these political resources and constraints as sources of political power is a useful approach to exploring this relationship. Kellman argues that political actors have five basic sources of power: decision-making authority, the ability to offer inducements, persuasiveness, deference, and strategic skill.¹⁸ In the context of the ACF, a coalition’s possession of these various sources of power ultimately defines the range and effectiveness of the various strategies, approaches and tools (guidance instruments) that it can employ in the pursuit of its objectives. Relative power is thus an important factor in determining the extent to which a coalition dominates, or has the potential to dominate, a subsystem. Not all sources of power are equal, as each is constrained by both its nature and system-wide parameters such as socio-economic conditions and the system’s legal structure.

The development and implementation of international treaties can be viewed as activities carried out through the coordination of overlapping international and national policy subsystems. The function of the international subsystem is to oversee cooperation among states regarding a particular international regime, while that of national policy subsystems overlapping with this international subsystem is to develop national policies for cooperating in this regime. The bridges between the international and national subsystems are coalition members active in both subsystems.

In political systems at all levels, a common set of policy beliefs is both the glue that holds coalitions together and the point around which coordination among overlapping subsystems revolves. Cooperation frequently occurs among actors in these overlapping subsystems, as coalitions at one level can be expected to have “parallel” coalitions at the other level. These “parallel” coalitions are comprised of the set of actors having identical, or substantially similar, policy beliefs.

International cooperation on global environmental issues such as climate change may require policy coordination among three or more different policy subsystems. While the national foreign policy subsystem may be responsible for the development of a nation’s overall policy regarding a regime, other domestic policy subsystems might be responsible for the development and implementation of specific aspects of this policy. For example, implementation of the climate change treaty might involve coordination among the national climate change policy subsystem, a

¹⁸ Kelman, Steven. 1987. *Making Public Policy*. New York: Basic Books.

national energy policy subsystem, a national transportation policy subsystem, and a national agriculture policy subsystem. Local or sub-national subsystems may also be involved.

1.3 ABOUT THIS STUDY

This study examines the international climate policy process and overlapping national policy processes in the United States, Japan, and the Netherlands through the lens of the ACF. These three countries were selected for study for several reasons. First, the three countries provide substantial opportunities for investigating the role of subsystem dynamics and overlap in treaty implementation. Each of these countries has one or more domestic processes governing energy, transportation and policies related to climate change, and each established during the late 1980's and early 1990's a domestic process to coordinate the development national climate change policies. Each country made a unilateral commitment to stabilize or reduce their greenhouse gas emissions by 2000, and each assembled a plan for doing so that contained a wide range of actions in a variety of functional areas. As was noted above, however, none of three countries are expected to meet these national commitments, in part because they did not fully implement these plans. Finally, many different individuals from a broad range of organizations in each of these countries participated in both the international and national political processes, setting the stage for the development of parallel coalitions in each subsystem that shared similar beliefs.

These three countries also present several advantages for comparative case studies in that some degree of control can be established for several critical variables can be controlled. For example, the CO₂ emissions/fuel supply ratio, a general indicator of the nature of national socioeconomic structure, is similar in all three countries.¹⁹ In addition, these countries illustrate the range of constitutional structures, or state strengths, found among industrialized countries. The concept of "state strength" ("strong states" vs. "weak states") has been suggested as a significant factor in treaty implementation, and thus may be an intervening variable in determining the nature and course of treaty implementation.²⁰

The objective of this study is quite limited. I am not attempting to argue that the failure of these countries to achieve the goals they set out in their national action plans is due to wholly to their failure to implement the measures proposed in these plans. My purpose is simply to illustrate some of the difficulties that must be overcome in implementing international agreements involving complex environmental phenomena and affecting a broad range of

¹⁹ OECD/IEA. 1996. *Climate Change Policy Initiatives 1995/96 Update*. Paris: Organization for Economic Cooperation and Development. It should be noted here that this study examines the political sources of variation in treaty compliance. The three countries have been selected in part because of the similarities in their economic structures, and economic factors are recognized as only one of the parameters affecting policy change. Thus no effort will be made to explain variation across countries in their economic structures as an explanation of degree of compliance.

²⁰ Gourevitch suggests, for example, that in societies with stronger states, power tends to be concentrated in fewer public institutions, facilitating domination by one coalition. In societies with weaker states, however, social forces tend to be more developed, public institutions are fragmented, and power is distributed among a number of agencies and institutions. This makes domination of a policy subsystem by a single coalition more difficult (Gourevitch, Peter Alexis. 1978. *The second image reversed: the international sources of domestic politics. International Organization* 32, 4: 881). Japan is one of the stronger states among OECD countries, while the United States is the most commonly cited example of a weak state. The Netherlands, with its parliamentary system and its multi-party coalition government represents a middle ground between these two extremes.

economic sectors. The national and subnational subsystems examined in each national case study were not chosen at random, but were selected because they exemplify situations in which policies and measures proposed in national climate policy subsystems were not developed or implemented when they came under the jurisdiction of overlapping subsystems with different political dynamics.

The study is presented in four sections. In this introductory section, I introduce the range of political issues associated with the implementation of a climate change treaty and provide a brief overview of the climate change issue and the political dynamics that transpired in each of the case studies. In Section II, I discuss in greater detail the ACF and the propositions that I will be testing in the case studies. The case studies themselves are presented in Section III. Finally, I provide in Section IV an analysis of these cases in the context of the ACF and suggest some conclusions that can be drawn with respect to the implementation of international environmental agreements. Methodological details regarding the study are described in the Appendix.

CHAPTER 2 - OVERVIEW

The climate change issue is one of the most difficult and complex of all international environmental policy issues. Scientists predict a warming of the world's climate by between 2 and 5 degrees Celsius over the next century, if no action is taken to deal with the "enhanced greenhouse effect" caused by a build-up of greenhouse gases in the atmosphere. This warming would be accompanied numerous adverse impacts, including rising sea levels, changes in rainfall and evaporation pattern, and the increased melting of snow and glaciers in mountainous regions. Addressing climate change, however, is extraordinarily difficult. Projected changes in global temperatures are given in time frames of decades to centuries, and much remains uncertain about the full magnitude of climate change. Uncertainties also remain with regards to many of the impacts of climate change and of the cost and benefits of responses. In addition, the burning of fossil fuels, the most significant source of greenhouse gas emissions, is critical to the world economy, and efforts to reduce these emissions requires addressing many divergent issues and interests among the many different countries engaged in the international political process.

While much has been written about climate change policies and politics, the topic remains an excellent subject for examining the interactions among scientific discoveries, international events, and coalition dynamics in the formulation and implementation of international environmental policy. The causes of the greenhouse problem are deeply embedded in the central aspects of the world's economic and social activity, and solving it will require substantial changes in domestic transportation, industrial, agricultural, and forestry practices. Solving it will also require extensive coordination among and within national and international governing institutions.¹ There exists a fairly clear benchmark against which the "implementation" of the FCCC can be measured. By 1993, all industrialized countries had pledged to return their emissions to their 1990 levels by the year 2000 and had developed an "action plan" describing in detail the measures they would take to do so.² Finally, because subsystems at all levels of government can be delineated with relative ease, the same model of the policy process can be applied in a similar manner to both the international and national climate change policy processes, thus shedding some light on the interactions among the two levels.

2.1 AN OVERVIEW OF THE CLIMATE CHANGE ISSUE

The theory of climate change is fairly well understood and accepted.³ The earth's climate is sustained by a delicate balance between the amount of the sun's energy that it absorbs and the

¹ Sebenius, James. 1991. Designing negotiations toward a new regime: the case of global warming. *International Security* 15, 4: 110-48.

² Some may argue that, because these initial commitments were made unilaterally rather than as of a formal treaty, the failure of countries to meet these commitments does not necessarily mean that they will fail to comply with the terms of the treaty. However, As will be discussed in the next chapter, national sovereignty softens the distinction between "hard" and "soft" international law, as (1). countries rarely make commitments in a treaty that they are not prepared to undertake anyway, and (2). the weak enforcement mechanisms contained in most treaties provide in practice no greater incentive to comply than exists for unilateral commitments. More importantly, as will be shown in the case studies, the processes through which these unilateral commitments were developed were no different than those involved in negotiating the commitments under the treaty.

³ A general summary of what governments consider to be the current state of knowledge on climate change can be

amount of energy that it radiates back into space. About one-third of the incoming solar radiation is reflected, with the rest being absorbed by the different components of the climate system, including the atmosphere, oceans, and land surface. These various components in turn emit energy in the form of infrared radiation. The long-term balance between these energy fluxes determines the average temperature of the earth, and thus its climate.

Although the balance between these incoming and outgoing flows of energy can be disturbed by both natural events and human activities, the effects of human activities are of greatest concern.⁴ Human activities alter the energy balance by injecting into or removing from the atmosphere heat-trapping, or “greenhouse” gases. The most significant of these include carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), and chlorofluorocarbons (CFCs) and their substitutes (e.g., hydrofluorocarbons (HFCs)). Once injected into the atmosphere, the long atmospheric residence times of many of these greenhouse gases allows them to absorb energy for decades to centuries afterwards.

Humans have contributed substantial amounts of greenhouse gases to the atmosphere since pre-industrial times. Atmospheric concentrations of carbon dioxide for example, have increased by thirty percent since the mid-18th century, while those of nitrous oxide have increased by fifteen percent. Concentrations of methane have grown by 145 percent. These increased concentrations correlate well with an observed 0.6°C increase in global average temperatures over the last century. In 2001, the Intergovernmental Panel on Climate Change (IPCC) concluded, “...most of the observed warming over the last 50 years is likely to have been due to the increase in greenhouse gas concentrations.” The IPCC also projected that, given current emission rates, average global temperatures could increase from 1.4°C to 5.8°C by 2100, and that the projected rate of warming is very likely to be greater than any seen in the last ten thousand years.⁵

This warming is expected to have both direct and indirect impacts on human populations and global ecosystems. According to the IPCC, precipitation is likely to increase, particularly over the northern mid- to high latitudes and Antarctica. Heat waves will become longer and more intense, causing an increase in the number of heat-related deaths and illnesses. The geographical range and seasons for disease-carrying insects would be extended, increasing the transmission rates of such diseases as malaria, yellow fever and viral encephalitis. Crop yields are expected to be reduced in most tropical and sub-tropical regions, and water resources in water-scarce regions are expected to become scarcer. The average sea level is likely to rise by .09 to .88 meters by 2100 as a result of glacial and ice-sheet melting and the thermal expansion of the oceans.⁶ This

found in the Policy-Makers Summary of the IPCC’s Third Assessment Report (IPCC. 2001. *Climate Change 2001: The Scientific Basis. Contribution of Working Group I to the Third Assessment Report of the Intergovernmental Panel on Climate Change*. Cambridge, United Kingdom and New York, NY, USA: Cambridge University Press).

⁴ Natural events include variations in the amount of energy radiated by the sun and volcanic eruptions that inject ash and sulfurous gases into the atmosphere. Fluctuations in solar radiation can have both a warming and cooling effect, while volcanic eruptions tend to lower the average temperature of the earth by increasing the amount of energy reflected back to space (IPCC. 2001. *Climate Change 2001: The Scientific Basis. Contribution of Working Group I to the Third Assessment Report of the Intergovernmental Panel on Climate Change*).

⁵ IPCC. 2001. *Climate Change 2001: The Scientific Basis. Contribution of Working Group I to the Third Assessment Report of the Intergovernmental Panel on Climate Change*.

⁶ IPCC. 2001. *Climate Change 2001: The Scientific Basis. Contribution of Working Group I to the Third*

could cause the flooding and erosion of coastal regions, displacing as many as 118 million people around the world. As many as 70 million people could be displaced in China and Bangladesh alone. Small islands such as Majuro Atoll in the Marshall Islands could lose as much as 80 percent of their land area. The expected increase in climate variability is expected to cause an increase in the frequency of severe storms, making many more low-lying areas vulnerable and substantially increasing the cost of storm and flood insurance. As average temperatures rise, the current range of the earth's climatic zones would migrate towards the poles, disrupting forests, rangelands, and other ecosystems. These shifts and associated changes in precipitation patterns could also severely disrupt fisheries and agricultural production systems.⁷

While the climate models upon which the predictions of climate change rest have been refined substantially over the few decades, many uncertainties remain. Many aspects of the biogeochemical cycling of greenhouse gases are still not well understood, and many feedback mechanisms associated with clouds, oceans, sea ice, and vegetation are still not well represented in climate models. More empirical data regarding various climate system variables (e.g., solar output, hydrological cycles, ecosystem changes) is needed.⁸ Because regional-scale climate changes are uncertain, quantitative projections as to the impacts of these changes are difficult to make. Finally, little is known about the impacts that the interactions of multiple climatic and non-climatic stresses will have on both human and natural systems.⁹

Carbon dioxide from the burning of fossil fuels is the most significant of the greenhouse gases. Industrial emissions account for 43 percent of carbon released in 1995, but have been growing at less than one percent annually in recent years. The building and the transport sectors contributed 31 and 22 percent, respectively, of 1995 energy-related CO₂ emissions, but have been growing at a much faster rate. Emissions from the transport sector have been increasing by 2.5 percent annually, while those from buildings have grown at a rate of almost 2 percent per year. Deforestation, particularly through burning, also releases significant amount of carbon dioxide.¹⁰ Significant emissions of CO₂, CH₄, and N₂O are also released through various agriculture and waste management practices.

In the short run, improving energy efficiency is the primary means to reduce greenhouse gas emissions, particularly CO₂. Improvements in the building design, such as more efficient windows and heating and cooling systems, can contribute significantly to emissions reductions. In the manufacturing sector, improving energy and materials management practices,

Assessment Report of the Intergovernmental Panel on Climate Change. Recent studies have shown that the Arctic region is already undergoing profound changes, including rising average air temperatures, thinning ice sheets, melting permafrost, and other ecological changes not seen in the geological record.

⁷ IPCC. 2001. *Climate Change 2001: Impacts, Adaptation, and Vulnerability. Contribution of Working Group II to the Third Assessment Report of the Intergovernmental Panel on Climate Change.* Cambridge, United Kingdom, and New York, NY, USA: Cambridge University Press.

⁸ IPCC. 2001. *Climate Change 2001: The Scientific Basis. Contribution of Working Group I to the Third Assessment Report of the Intergovernmental Panel on Climate Change.*

⁹ IPCC. 2001. *Climate Change 2001: The Scientific Basis. Contribution of Working Group I to the Third Assessment Report of the Intergovernmental Panel on Climate Change.*

¹⁰ IPCC. 2001. *Climate Change 2001: Mitigation. Contribution of Working Group III to the Third Assessment Report of the Intergovernmental Panel on Climate Change (IPCC).* Cambridge, United Kingdom and New York, NY, USA: Cambridge University Press.

cogeneration, steam recovery, using more efficient motors and other electrical devices, and recycling materials could all reduce emissions. Modifying production processes, eliminating solvents, replacing feedstocks and other materials, and increasing the recycling of materials could also reduce production-related emissions. In the transport sector, energy use could be reduced through the development and use of smaller and more energy-efficient vehicles, altering land-use, mobility, and life-style patterns, and shifting to less energy-intensive modes of transportation. In the longer term, as existing power plants are replaced, renewable sources of energy will become more important.¹¹

There is considerable debate about the costs associated with these emissions reductions. The IPCC suggests that most reductions in the building sector could be achieved for little or no additional cost, as could about half of those in the industrial sector. Estimates of the costs of emissions reductions in the transport sector, however, range from less than \$25 per ton of carbon (tC) to more than \$50/tC. Opinions differ as to the impacts of these costs on overall GDP. Top-down analyses of actions necessary in OECD countries to stabilize emissions at 1990 levels suggest that the costs associated with these actions would be in the range of 0.2 percent of GDP to about 2 percent of GDP in 2010. This cost could be reduced to 0.1 percent to 1.1 percent of GDP if an international emissions trading system is implemented, as this approach would in theory reduce emissions on those areas where it is cheapest to do so.¹² This would require that international institutions and mechanisms be established that would ensure that appropriate flows of capital and technologies among countries takes place.¹³

All of these cost estimates are critically dependent on the assumptions used. Much of the difference in the estimates are a function of different assumptions about such factors as consumption patterns, resource and technology availability, the desired level and timing of abatement, and the choice of policy instrument. For instance, if a carbon or energy tax is used to reduce emissions, the cost of mitigation depends very much on how the revenues from the tax are distributed. If the revenues are used to reduce existing taxes, they could potentially produce a net economic benefit. On the other hand, if the taxes were used to finance programs with relatively low economic returns, the overall economic costs of the tax would increase. There also exist differences in baseline estimates of the energy efficiency improvements that would occur without climate change policies.

A diverse set of actors with very different interests have become involved in efforts to address it. Over 180 countries participated in the negotiations of the FCC and the Kyoto Protocol, all having different concerns about climate change. Their contributions to the problem differ, they face unequal abatement costs, and they face unequal risks from the potential impacts of climate change. Historically, OECD countries have contributed the largest portion of GHGs in the atmosphere, and these countries are currently responsible for about two-thirds of all GHG emissions. Emissions from developing countries are increasing rapidly, however, as their

¹¹ IPCC. 2001. *Climate Change 2001: Mitigation. Contribution of Working Group III to the Third Assessment Report of the Intergovernmental Panel on Climate Change (IPCC)*.

¹² IPCC. 2001. *Climate Change 2001: Mitigation. Contribution of Working Group III to the Third Assessment Report of the Intergovernmental Panel on Climate Change (IPCC)*.

¹³ IPCC. 2001. *Climate Change 2001: Mitigation. Contribution of Working Group III to the Third Assessment Report of the Intergovernmental Panel on Climate Change (IPCC)*.

populations increase and their economies grow. Although global GHG emissions increased by nine percent between 1990 and 2003, those from developing countries increased by 37 percent during the same period.¹⁴ The developing countries, particularly low-lying and island countries of the tropics, are also among the most vulnerable to impacts of climate change.¹⁵ Those developing countries with economies dependent on oil exports would also be affected by measures that reduce overall oil consumption.¹⁶

In addition, different sectors of the economies with each country would shoulder different portions of the abatement costs depending on the response options chosen. For example, in Norway, mandatory reductions in CO₂ emissions from energy generation would be costly, as much of that country's electricity is generated through hydroelectric facilities. In contrast, the United Kingdom reduced its CO₂ emissions significantly during the 1990's with a net benefit to the economy by privatizing, and ultimately closing, relatively inefficient coal mines.¹⁷ Some industries, such as solar and wind power, would benefit substantially from CO₂ reduction measures. How all of these interests interact among international and national policy processes is not well understood.

2.2 INTERNATIONAL AND NATIONAL CLIMATE POLICY SUBSYSTEMS

This study examines the international climate policy process and overlapping national policy processes in the United States, Japan, and the Netherlands between 1988 and 1997. The international case study describes the dynamics that occurred in the international climate policy subsystem as emissions reductions commitments for industrialized countries were negotiated as part of negotiations for the Framework Convention on Climate Change (FCCC) and its Kyoto Protocol. The case studies of the national climate change policy processes describe the dynamics that occurred during this period in the corresponding domestic climate policy subsystems of the United States, Japan, and the Netherlands, respectively, and some of the relevant policy subsystems that overlap with the domestic climate policy subsystems in these countries. A diagram of these overlapping international, national and subnational subsystems is provided in Figure 2.1.¹⁸

¹⁴ World Resources Institute. 2003. *World Resources 2002-2004: Decision for the Earth: Balance, Voice and Power*. Washington, DC: World Resources Institute.

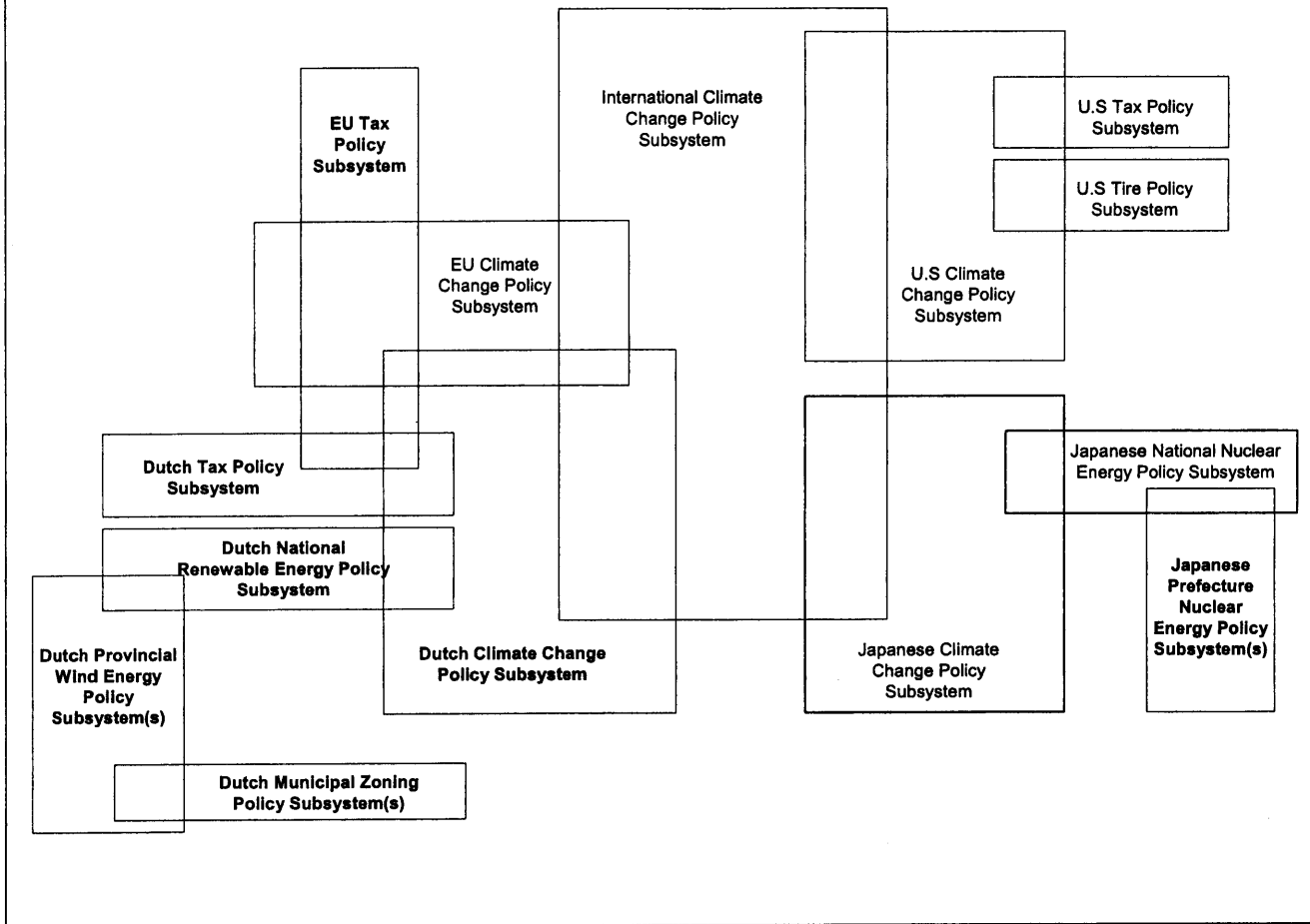
¹⁵ IPCC. 2001. *Climate Change 2001: Impacts, Adaptation, and Vulnerability. Contribution of Working Group II to the Third Assessment Report of the Intergovernmental Panel on Climate Change*.

¹⁶ IPCC. 2001. *Climate Change 2001: Mitigation. Contribution of Working Group III to the Third Assessment Report of the Intergovernmental Panel on Climate Change (IPCC)*.

¹⁷ Unander, Fridtjof. 2003. *Understanding CO₂ Emission Trends in IEA Countries*. Paris: International Energy Agency.

¹⁸ Also overlapping with the INC/COP subsystem were climate policy subsystems within country groups, such as the European Union (EU), the Group of 77 plus China, that had the authority to speak on behalf of their member states. As is traditionally the case in international negotiations, countries with similar views on key issues tended to work together as a country group. Four country groups were represented in the INC/COP subsystem: the Alliance of Small Island States (AOSIS); the Group of 77 and China (G-77); the Organization of Petroleum Exporting Countries (OPEC); and the European Union (EU). Of these, only the EU has formally organized itself as a regional economic integration organization (see Chapter 9). Russia, the countries of the former Soviet Union, and other Eastern European countries ("countries in transition, or CITs), also tended to work together and speak with a common voice, as did the non-European OECD countries. This latter group, which consisted of Japan, the United

Figure 2.1 Examples of Overlapping International, National, and Sub-national Subsystems Associated with Climate Change Policy



2.2.1. The International Climate Change Policy Subsystem

The international climate policy subsystem is comprised of the set of participants in meetings of the Intergovernmental Negotiating Committee (INC) for the Framework Convention on Climate Change during the negotiations of the FCCC (1990-1992) and the Conference of the Parties (COP) to the Framework Convention on Climate Change during the negotiations of the Kyoto Protocol (1992-1997). These two entities, together with the political process that led to the establishment of the INC, comprised the principle fora in which discussions on international climate change policy have taken place, with the COP supplanting the INC once the FCCC entered into force. They can thus be considered to be one autonomous subsystem. Overlapping with the INC/COP climate subsystem were two other major international subsystems: the Intergovernmental Panel on Climate Change (IPCC) and the U.N. General Assembly.

States, Sweden, Canada, Norway, and New Zealand, became known as the "Common Interest Group" during the INC negotiations and "JUSSCANNZ" during negotiations of the Kyoto Protocol.

The participants in this subsystem coalesced into two major coalitions with opposing beliefs regarding commitments that industrialized countries should make to reduce their emissions. The “precautionary” coalition, which believed that climate change posed a real and substantial threat to the planet, wanted these countries to reduce their emissions significantly. The “economic growth” coalition believed that such reductions could not be justified given the potential economic costs and the many scientific uncertainties.

The international climate policy process began in early 1988 when these two coalitions first engaged in a sustained debate regarding international action to address climate change. These early discussions led to the creation of the IPCC, which was charged with assessing the science and impacts of and potential responses to climate change. As discussions regarding an agreement by the international community to control GHG emissions continued in the IPCC meetings, the U.N. General Assembly, and a series of high-level conferences, the INC was established in 1990 as the forum in which such a convention would be negotiated. This Framework Convention on Climate Change was to be completed by July 1992 and signed at the UN Conference on Environment and Development in Rio de Janeiro, Brazil. By 1990, precautionary coalitions dominated the national climate policy processes in all industrialized countries but the United States, and all of these countries made unilateral commitments at that point to stabilize or reduce their emissions. Although the precautionary coalition was able to control much of the debate in the INC, the economic growth coalition, which controlled the climate policy process in the United States, was able to force its opponents to accept a treaty that did not contain specific commitments for emission reductions by industrialized countries.

When the FCCC entered into force in 1994, the precautionary coalition reopened the debate over specific commitments by industrialized countries to reduce their emissions. Having gained control of the US climate policy subsystem in 1993 with the election of President Clinton and Vice-President Al Gore, it was able to ensure that the Kyoto Protocol that was signed in 1997 contained the specific targets and timetables for industrialized countries. This domination by the precautionary coalition was not complete, however, as the commitments contained in the protocol were significantly weaker than those it had initially sought almost ten years earlier.

2.2.2. National Climate Policy Subsystems

After signing the Convention, industrialized countries began the process of formulating national climate change programs. Most of these countries submitted in September of 1994 their first national reports describing these initial efforts. Most of these reports state that the policies described in them would reduce greenhouse gas emissions sufficient to meet the “aim” established by the Convention, as well as unilaterally adopted national greenhouse gas emissions targets.¹⁹ Although the FCCC does not bind countries to these unilateral targets, it has generally been acknowledged that the policies and measures described in the reports failed to achieve their goals, and greenhouse gas emissions have continued to rise.²⁰ Much this failure is due to

¹⁹ As will be discussed in Section 3, most OECD nations adopted unilateral emissions reductions targets (generally reductions in emissions to 1990 levels by the year 2000). in order to demonstrate a commitment to addressing climate change.

²⁰ In independent NGO reviews of national plans (e.g., Climate Action Network. 1995. *Independent NGO Evaluations of National Plans for Climate Mitigation - OECD Countries: Third Review, January 1995*. Washington, D.C.: United States Climate Action Network and Climate Network Europe; Climate Action Network.

difficulties encountered when the responsibility for developing and implementing various policies and measure fell to subsystems outside of the national climate policy subsystem that were controlled by coalitions holding beliefs quite different than those of the coalitions controlling the national climate policy subsystems.

The U.S. Climate Policy Subsystem

When the political process began in 1988, a precautionary coalition parallel to that dominating the international climate policy subsystem controlled the U.S. climate policy subsystem. The economic growth coalition was able to gain control of the subsystem within the following year, however.²¹ Although hampered by a number of external factors as well as its own political missteps, it was able to ensure not only that U.S. climate policy between 1989 and 1992 was reflective of its beliefs but also that these beliefs were not compromised by the FCCC negotiated in the international subsystem.

Although the precautionary coalition regained control of the U.S. climate policy subsystem in early 1993, this control was not complete. Many powerful members of Congress became active in the economic growth coalition in 1994, and were able to prevent the precautionary coalition from producing policies fully reflective of its beliefs. In addition, responsibility for developing and implementing some of the measures proposed by the precautionary coalition in the national climate policy subsystem, such as a BTU tax and a tire efficiency labeling system, fell to overlapping subsystems. The development and implementation of the proposed measures ended when the coalitions dominating these overlapping subsystems determined that they were inconsistent with their own beliefs.

The Dutch Climate Policy Subsystem

As in the international and U.S. climate policy subsystems, the Dutch national climate policy subsystem was dominated initially by the precautionary coalition. Unlike in the United States, however, this domination was relatively complete, and continued throughout the 1988-1997 period. Although the economic growth coalition gained some strength towards the end of this period, it was not able to make significant changes in the Dutch national climate policy before negotiations for the Kyoto Protocol were completed.

As in the United States, responsibility for the development and implementation of a number of emissions reduction measures proposed in the climate policy subsystem, such as an energy tax and a wind energy program, fell to overlapping subsystems. In the case of the energy tax,

1997. *Independent NGO Evaluations of National Plans for Climate Mitigation - OECD Countries: Fifth Review, October 1997*. Somerset, England: Climate Network Europe), national targets were the primary criteria against which the plans were evaluated. The negotiators of the Climate Convention did not specify in detail the types of policies and measures that must be developed or the processes that nations should use to prepare their reports, assuming that each country would undertake a process appropriate for its national circumstances and political processes.

²¹ Throughout each of the case studies I make references to “the” precautionary coalition and “the” economic growth coalition. I do not mean to imply that there is a single precautionary or economic growth coalition active across multiple international and national subsystems. As will be discussed in greater detail in the following chapters, the coalitions active in a particular subsystem are unique to that subsystem, although they may share membership with parallel coalitions in other subsystems.

members of the economic growth coalition were able to gain sufficient strength in the energy tax subsystem that they were able to weaken the proposal significantly. They were also able to take advantage of allies within the overlapping EU climate and energy tax subsystems. In the case of the Dutch wind energy policy, the national wind energy program failed to meet its goals after regional wind energy development efforts were stymied by opposition by coalitions within local zoning policy subsystems considering the zoning changes needed in order to construct the individual wind towers.

The Japanese Climate Policy Subsystem

Control of the climate policy subsystem was shared by the precautionary and economic growth coalitions throughout the 1988-1997 period. Although the economic growth coalition was in a position to control most of the policy decisions, it was constrained both by external events and a number of institutional, socio-economic and other factors. These same factors provided the precautionary coalition with sufficient strength to force a compromise in Japan's climate policy. As in the United States and the Netherlands, a number of the measures proposed in the national climate policy subsystem were developed and implemented in other national or subnational subsystems. In particular, efforts by MITI and utilities to enlarge Japan's nuclear energy program were thwarted when proposals for new facilities were opposed by coalitions controlling approval processes within the energy policy subsystems of the individual prefectures.

Details of the events and interactions that transpired within and among these various international, national and subnational subsystems are described in greater detail in Section III. To understand the implications of these events and interactions, however, additional detail regarding the ACF and its application to the implementation of international environmental agreements is required. This is undertaken in the following Section II.

**SECTION II: THE
ACF AND ITS
APPLICATION**

CHAPTER 3 - THE ACF AND INTERNATIONAL ENVIRONMENTAL AGREEMENTS

Although the Advocacy Coalition Framework was designed to explain policy change at the national and sub-national levels, fundamental similarities between international and national policy dynamics suggest that it can be used to explore policy processes at the international level. The influence of international environmental agreements such as the Framework Convention on Climate Change on domestic policies can then be assessed by examining the differences in political resources and constraints among competing coalitions at each level.

The ACF builds on the view of most policy scholars that the policy subsystem is the most useful unit of analysis through which to examine policy formulation and implementation.¹ Figure 3.1 shows a general overview of the ACF. Sabatier and Jenkins-Smith argue that the best way of understanding the complex networks of actors active in these subsystems is to group them into “advocacy coalitions,” sets of actors from different institutions sharing a set of beliefs and coordinating their activities over time. Using a range of strategies and guidance instruments, these coalitions compete with each to dominate the political process within the subsystem and incorporate their beliefs into government policies. Implementation occurs when, at some point during this process, governmental authorities make decisions regarding institutional rules, resources allocations, and appointments pertaining to a government policy or program. These decisions result in a set of policy outputs, which in turn produces both intended effects and a range of unintended side effects.

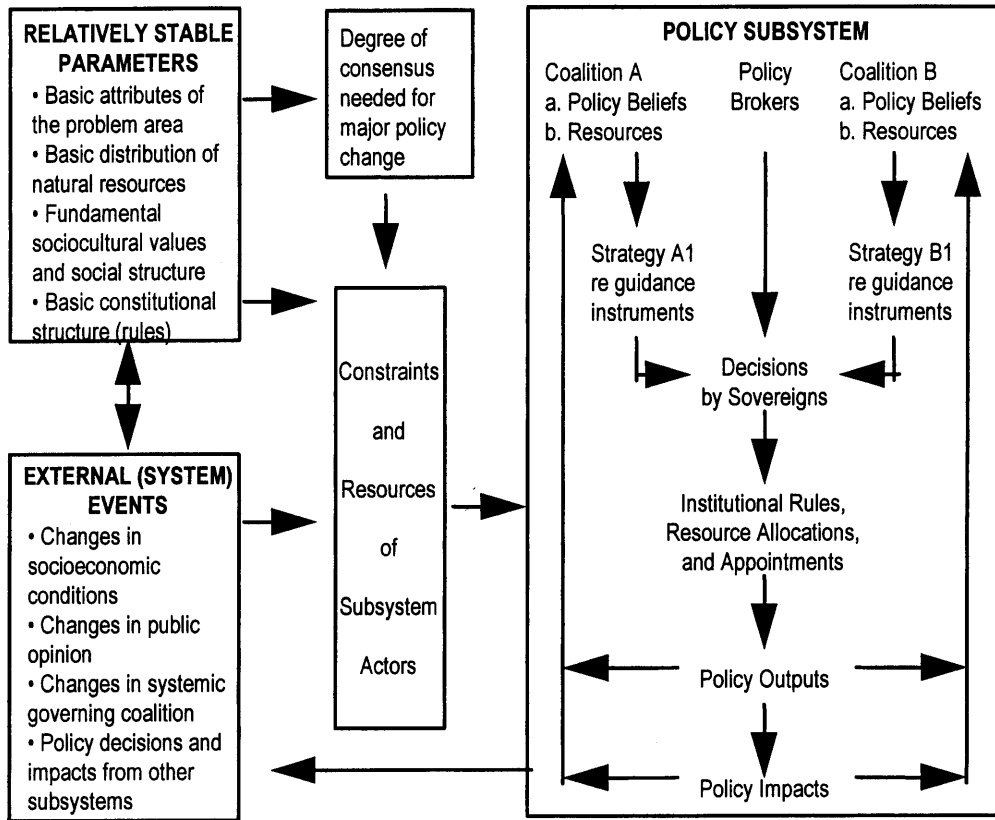
As the implementation process proceeds over time, subsystem coalitions revise their beliefs and alter their strategies according to their perception of these impacts, the adequacy of the decision-making process, new information arising from various research efforts, and events and changes external to the subsystem. Because belief systems are very difficult and slow to change, however, this learning process generally produces only modest changes in policy over the long term (a decade or more). More substantial and rapid change tends to occur when various events external to the subsystem alter the power structure within the subsystem by changing the political resources and constraints of subsystem actors.

The development of international treaties follows a very similar course. According to Dubey, this process starts:

“...with the quest of ideas that become the basis of negotiations. The ideas get converted into issues that are joined by individual and groups of countries. The formulation of individual country, subregional, regional, and wider group positions on the issues is (then) a very important phase of the negotiating process, ... (involving) important trade-offs among the countries of the South and North... Then comes the crucial stage of trade-offs and compromises...resulting in the adoption of resolutions, declarations, and decisions either by consensus or by majority voting...The final phase of the cycle, getting the ideas translated into concrete action, maintaining their continuity, and ensuring progress in the evolution, is the most difficult and complex part of the negotiating process. Most of the resolutions/ declarations...provide for a built-in review

¹ Sabatier, Paul A. and Hank Jenkins-Smith, eds. 1993. *Policy Change and Learning: An Advocacy Coalition Approach*. Boulder, San Francisco and Oxford: Westview Press.

Figure 3.1 The Advocacy Coalition Framework



Sabatier and Jenkins-Smith, 1998

mechanism to assess progress in implementation. But more frequently, in order to insure implementation, it becomes necessary to initiate a whole series of new negotiating processes. Each of these processes may constitute a separate cycle of negotiation.”²

The negotiation and implementation of international environmental treaties such as the FCCC occur through the coordination of overlapping international and national policy subsystems.³ The role of the international subsystem is to develop the regimes through which

² Dubey, Muckund. 1985. The Main Forces at Work. In *Multilateral Negotiation and Mediation*, ed. Arthur S. Lall, pg. 155-176. New York: Columbia University Press.

³ The ACF has been used by a number of authors to explore climate change policy-making processes as well as interactions among domestic and international policy processes (e.g., Litfin, K. T. 2000. Advocacy coalitions along the domestic-foreign frontier: Globalization and Canadian climate change policy. *Policy Studies Journal* 28, 1: 236-252; Bulkeley, H. 2000. Discourse coalitions and the Australian climate change policy network. *Environment and Planning C-Government and Policy* 18, 6: 727-748; Dolan, C. J. 2003. Economic policy and decision making at the intersection of domestic and international politics: The advocacy coalition framework and the National Economic Council. *Policy Studies Journal* 31, 2: 209-236; Dudley, G. and Jeremy Richardson. 1999. Competing advocacy coalitions and the process of 'frame reflection': a longitudinal analysis of EU steel policy. *Journal of European Public Policy* 6, 2: 225-248; Weber, N. and T. Christophersen. 2002. The influence of non-governmental organizations on the creation of Natura 2000 during the European Policy process. *Forest Policy and Economics* 4, 1: 1-12). However, none of these studies have attempted to elaborate on the basic elements of the ACF in order to create a coherent model of the interactions among overlapping national and international subsystems. In addition,

nations cooperate in addressing an issue or problem area. National policy subsystems overlapping with this international subsystem produce the national policies through which the countries cooperate in the regime. Because individuals active in international subsystems are also active in these national subsystems, coalitions at one level can be expected to have “parallel” coalitions at the other level with identical, or substantially similar, policy beliefs. These parallel coalitions form an important bridge between the two levels. Figure 3.2 provides a diagram of these parallel processes.

The ACF can be used to develop specific hypotheses concerning advocacy coalitions and policy dynamics that can be tested empirically. A list of those hypotheses particularly relevant to advocacy coalition, policy change, and learning is provided in Table 3.1. These hypotheses, which have been developed, tested and refined by Sabatier, Jenkins-Smith and others in a wide range of cases, provide a useful starting point for formulating additional propositions with which to explore the nature of national policy change in response to international environmental treaties.⁴

The purpose of the three chapters of this section is to provide the theoretical underpinning of this study. In the remainder of this chapter, I describe the nature of advocacy coalitions and policy subsystems and suggest how corresponding elements found in the international relations literature and the four case studies fit into the framework. In Chapter 4, I suggest how reinterpreting political coalition resources and constraints resources as sources of political power is a useful approach for understanding the interactions among system parameters and coalition behavior, a critical element in the process of policy change. I describe in Chapter 5 how this interpretation of the ACF can be used to examine interactions between the international and national climate change policy processes and the dynamics of treaty implementation.

the subsystems in which the competing coalitions interact have not been clearly delineated and the dynamics of interactions among coalitions in overlapping subsystems have not been explored.

⁴ Sabatier, Paul A. and Hank Jenkins-Smith. 1997. *The Advocacy Coalition Framework: An Assessment*. In *Theories of the Policy Process*, ed. Paul A. Sabatier. Boulder, CO: Westview Press.

Figure 3.2 Parallel International and National Policy Subsystems

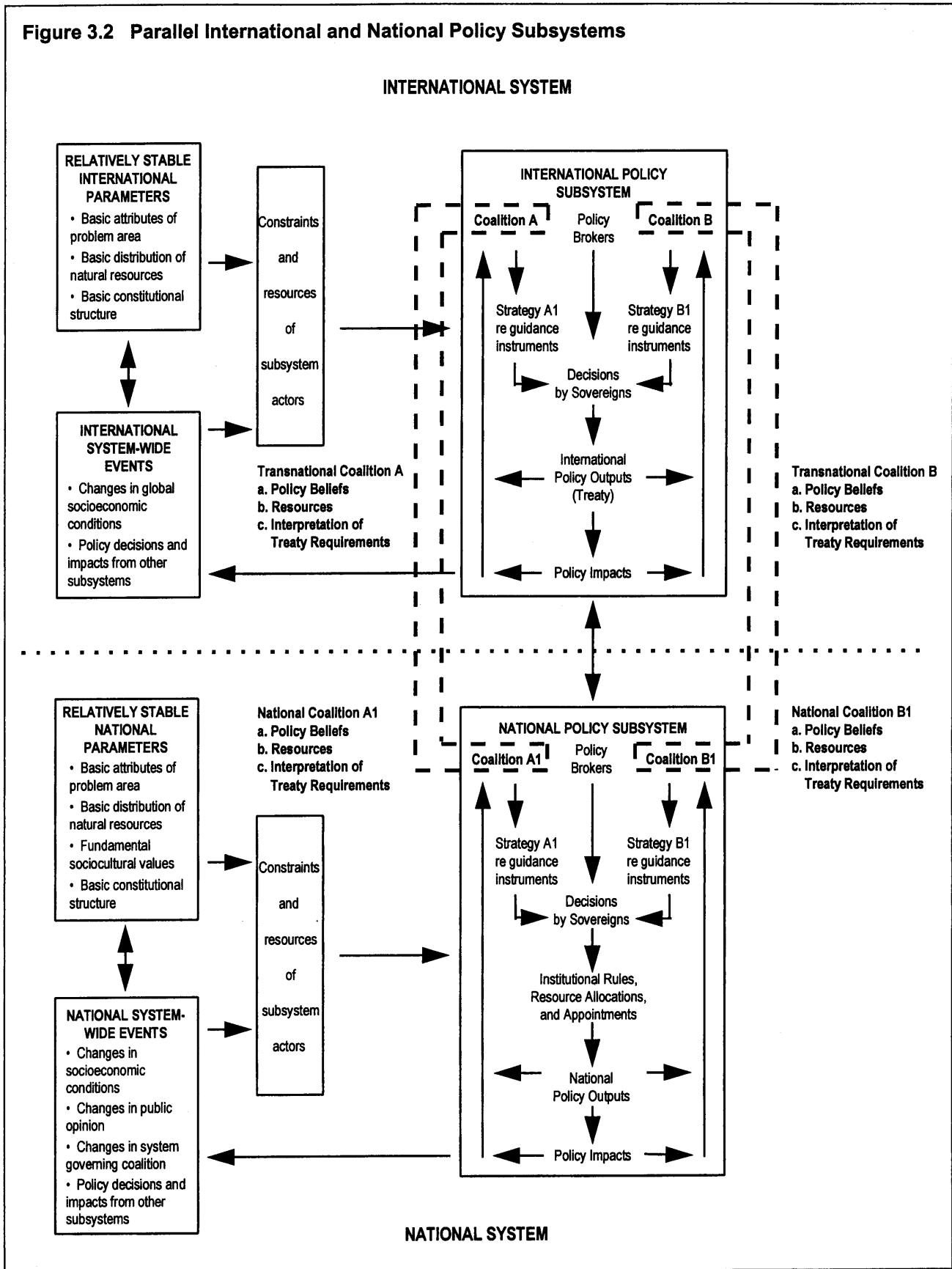


Table 3.1 Selected Hypotheses of the Advocacy Coalition Framework

Hypotheses concerning Advocacy Coalitions

- On major controversies within a mature policy subsystem when policy core beliefs are in dispute, the lineup of allies and opponents tends to be rather stable over periods of a decade or so.
- Actors within an advocacy coalition will show substantial consensus on issues pertaining to the policy core, although less so on secondary aspects.
- An actor (or coalition) will give up secondary aspects of his (its) belief system before acknowledging weaknesses in the policy core.

Hypotheses concerning Policy Change

- The policy core attributes of a government program in a specific jurisdiction will not be significantly revised as long as the advocacy coalition which instituted the program remains in power within that jurisdiction—except when the change is imposed by a hierarchically superior jurisdiction.
- Significant perturbations external to the subsystem (e.g., changes in socioeconomic conditions, system-wide governing coalitions, or policy outputs from other subsystems) are a *necessary, but not sufficient*, cause of change in the *policy core* attributes of a governmental action program.

Hypotheses Concerning Policy-Oriented Learning, Particularly Across Coalitions

- Policy-oriented learning across belief systems is most likely when there is an intermediate level of informed conflict between the two coalitions. This requires that (1) each coalition has the technical resources to engage in such a debate; and that (2) the conflict is between secondary aspects of one belief system and core elements of the other or, alternatively, between important secondary aspects of the two belief systems.
- Problems for which accepted quantitative data and theory exist are more conducive to policy-oriented learning than those in which data and theory are generally qualitative, quite subjective, or altogether lacking.
- Problems involving natural systems are more conducive to policy-oriented learning across belief systems than those involving purely social or political systems because in the former many of the critical variables are not themselves active strategists and controlled experimentation is more feasible.
- Even when the accumulation of technical information does not change the views of the opposing coalition, it can have important impacts on policy—at least in the short run—by altering the views of policy brokers.

3.1 ACTORS, COALITIONS, AND POLICY SUBSYSTEMS

The policy subsystem, the fundamental element of the ACF, is defined as a semi-autonomous arena in which the policy process takes place and from which policies emanate.⁵ It is not a formal institution of governance, however, but an entity delineated by the government

⁵ The concept of the policy subsystem has its origins in the idea of “iron triangles,” interactions among administrative agencies, legislative committees, and interest groups, that has long been accepted by political scientists (Sabatier, Paul A. 1993. *The Advocacy Coalition Framework*. In *Policy Change and Learning: An Advocacy Coalition Approach*, ed. Paul A. Sabatier and Hank Jenkins-Smith. Boulder, San Francisco and Oxford: Westview Press). Because political actors generally require specialized knowledge if they are to be successful in influencing policy, the political elites responsible for policy-making in a specific area tend to form relatively autonomous policy subsystems, or domains, that can be distinguished from the broader political system. These autonomous subsystems arise because the complexity of most policy issues in terms of understanding relevant laws and regulations, the magnitude of the problem, and the influence of various causal factors, force political actors to specialize if they are to have any influence (Sabatier and Jenkins-Smith. 1997. *The Advocacy Coalition Framework: An Assessment*). See, e.g., Griffith, Ernest. 1961. *Congress: Its Contemporary Role*. New York: New York University Press; Dodd, Lawrence. 1976. *Coalitions in Parliamentary Governments*. Princeton: Princeton University Press, and Hamm, Keith. 1983. Patterns of Influence Among Committees, Agencies and Interest Groups. *Legislative Studies Quarterly* 8, August: 379-426.

officials, interest group representatives, journalists, scientists, and others individuals active in the process. These actors coalesce into coalitions according to their belief systems and work together to transform these belief systems into public policies.⁶

3.1.1. Actors and Beliefs

The use of the ACF to examine the policy process is based upon three fundamental precepts. First, political actors are assumed to hold a certain set of policy-oriented beliefs and seek through the policy process to translate these beliefs and goals into policies and programs. Second, actors holding the same or similar beliefs and goals tend to work together as a coalition. The belief structures of these coalitions, therefore, generally reflect those of their constituent members. Finally, public policies can be conceptualized in the same manner as belief systems, and thus can be “mapped” on the same canvas. These links among beliefs, coalitions, and policies provide a means for assessing the influence over time that various actors have on the policy process.

The belief systems of political elites can be organized into a hierarchical structure, with higher and broader levels constraining more specific beliefs.⁷ The three basic categories of beliefs are deep core beliefs, policy core beliefs, and secondary aspects. A summary of these beliefs is shown in Table 3.2.

Deep core beliefs comprise the highest and broadest level of a policy elite’s belief system. These beliefs include the basic normative and ontological axioms defining a person’s personal philosophy (e.g., the “Left/Right” scale), and apply to all policy areas. Because deep core beliefs are fundamentally normative in nature, they are extremely difficult to change; doing so would require something akin to a religious conversion.

Policy core beliefs are the fundamental policy positions regarding the problem with which the subsystem is concerned. They comprise the basic strategies for achieving core values within the subsystem, and are comprised of both normative precepts and precepts with substantial empirical components. Normative precepts include such elements as the value priorities regarding the issues in question, while precepts with a substantial empirical component include the overall seriousness of the problem, its basic causes, and the distribution of authority among levels of government. While the normative aspects of policy core beliefs tend to make them very difficult to change, those elements with substantial empirical elements may change over a period of time if gradual accumulation of evidence reveals serious anomalies.

⁶ The discussion in this chapter of the ACF is summarized from Sabatier and Jenkins-Smith. 1993. *Policy Change and Learning: An Advocacy Coalition Approach*; Sabatier and Jenkins-Smith. 1997. *The Advocacy Coalition Framework: An Assessment*; and Sabatier, Paul A. and Matthew A. Zafonte. 1997. *Policy-Oriented Learning Between Coalitions: Characteristics of Successful Professional/Scientific Fora.*

⁷ See Marcus, Alfred A. and Gordon P. Rands. 1993. *Public Policy, Economics, and the Environment*. In *Managing Environmental Issues*, ed. Roger Buchholz; Schlager, E. 1995. *Policy-Making And Collective Action - Defining Coalitions Within The Advocacy Coalition Framework*. *Policy Sciences* 28, 3: 243-270; Green, David and Ian Shapiro. 1994. *Pathologies of Rational Choice Theory*. New Haven: Yale University Press; and Martin, Lisa L. 1995. *Heterogeneity, Linkage and Commons Problems*. In *Local Commons and Global Interdependence: Heterogeneity and Cooperation in Two Domains*, ed. Robert O. Keohane and Elinor Ostrom, pg. 253. London: Sage publications.

Table 3.2 The Structure of Policy Elite Belief Systems

	Deep Core	Policy Core	Secondary Aspects
Defining characteristics	Fundamental normative and ontological axioms.	Fundamental policy positions concerning the basic strategies for achieving core values within the subsystem.	Instrumental decisions and information searches necessary to implement policy core.
Scope	Across all policy subsystems.	Subsystem-wide.	Usually only part of subsystem.
Susceptibility to change	Very difficult; akin to a religious conversion.	Difficult, but can occur if experience reveals serious anomalies.	Moderately easy; this is the topic of most administrative and legislative policymaking.
Illustrative components	<ol style="list-style-type: none"> 1. The nature of man: <ol style="list-style-type: none"> i. Inherently evil vs. socially redeemable. ii. Part of nature vs. dominion over nature iii. Narrow egoists vs. contractarians. 2. Relative priority of various ultimate values: freedom, security, power, knowledge, health, love, beauty, etc. 3. Basic criteria of distributive justice: whose welfare counts? Relative weights of self, primary groups, all people, future generations, nonhuman beings, etc. 	<p>Fundamental Normative Precepts:</p> <ol style="list-style-type: none"> 1. Orientation on basic value priorities; 2. Identification of groups or other entities whose welfare is of greatest concern; <p>Precepts with a Substantial Empirical Component:</p> <ol style="list-style-type: none"> 3. Overall seriousness of the problem; 4. Basic causes of the problem; 5. Proper distribution of authority between government and market; 6. Proper distribution of authority among levels of government; 7. Priority accorded various policy instrument (e.g., regulation, insurance, education, direct payment, tax credits); 8. Method of financing; 9. Ability of society to solve the problem (e.g., zero-sum competition vs. potential for mutual accommodation; technological optimism vs. pessimism). 10. Participation of public vs. experts vs. elected officials. 	<ol style="list-style-type: none"> 1. Seriousness of specific aspects of the problem in specific locales. 2. Importance of various causal linkages in different locales and over time. 3. Most decisions concerning administrative rules; budgetary allocations, disposition of cases, statutory interpretation, and statutory revision. 4. Information regarding performance of specific programs or institutions.

Sabatier & Jenkins-Smith, 1997

Secondary aspects of belief systems are the instrumental decisions and information searches necessary to implement the policy core beliefs. They are usually applicable to only part of the subsystem issues, and tend to be moderately easy to change. Because actors are generally willing to make compromises regarding these secondary aspects before they relinquish their policy core beliefs, they are often the principle focus of administrative and legislative policymaking.⁸

The model of the individual used in the ACF assumes that actors are “instrumentally” rational. While political actors are rational in the sense that they seek to use information and other resources to achieve their goals, their ability to perceive the world and to process information is affected by cognitive biases and constraints.⁹ This view of the individual has a

⁸ Sabatier and Jenkins-Smith. 1997. *The Advocacy Coalition Framework: An Assessment*.

⁹ Sabatier points out that, in an uncertain world, one needs to spend a great deal of time learning about which policies will most like achieves one’s interests, as well as the trade-offs among various interests and goals. See, e.g., Jervis, Robert. 1976. *Perception and Misperception in International Politics*. Princeton: Princeton University Press,

number of important implications. Because actors are limited in their ability to process and analyze information by time and computational constraints, they have substantial incentive to use a variety of heuristics as guides to complex situations.¹⁰ In addition, their perceptions are strongly filtered by their preexisting normative and other beliefs, and they weigh losses more heavily than gains. As a result, different actors will tend to interpret the same piece of evidence in different ways, and actors arriving at one conclusion will frequently suspect that those arriving at different conclusions are motivated by some hidden, nefarious purpose or interest. These dynamics make resolving conflicts much more difficult than the rational actor model predicts.¹¹

3.1.2. Advocacy Coalitions

A large number of political elites can be active in a given subsystem at a given time, and can include not only officials from multiple levels of government but journalists, researchers, policy analysts, and other individuals involved in the generation, dissemination, and evaluation of policy ideas. Those actors sharing a set of beliefs and actively cooperating to achieve their policy goals form advocacy coalitions, with the number of coalitions in a subsystem depending largely on the scope of the issue and the number of individuals.¹²

Advocacy coalitions are defined as “people from a variety of positions (e.g., elected and agency officials, interest group leaders, researchers) who share a particular belief system—i.e., a set of basic values, causal assumptions, and problem perceptions—and who show a non-trivial degree of coordinated activity over time.”¹³ These coalitions form as the various subsystem actors recognize that the probability of success increases if they pool their political resources.¹⁴ In general, the number of politically significant coalitions in a subsystem is likely to be quite small, as the forces that spur the creation of coalitions also tend to limit their number.¹⁵

Elster, Jon, ed. 1986. *Rational Choice*. New York: NYU Press; March, James G. 1986. Bounded Rationality, Ambiguity, and the Engineering of Choice. In *Rational Choice*, ed. Jon Elster. New York: NYU Press; Jones, Bryan. 1994. *Reconceiving Decision-Making in Democratic Politics*. Chicago: University of Chicago Press; Green and Shapiro. 1994. *Pathologies of Rational Choice theory*; and King, Gary, Robert O. Keohane, and Sidney Verba. 1994. *Designing Social Inquiry*. Princeton: Princeton University Press.

¹⁰ One of the implications of this is that policy core beliefs, because they are fairly general in scope yet very salient, provide more efficient guides to behavior over a wide variety of situations than do secondary aspects. This, in turn, contributes to the ACF’s assumption that the policy core provides the principal “glue” of coalitions (Sabatier and Zafonte. 1997. *Policy-Oriented Learning Between Coalitions: Characteristics of Successful Professional/Scientific Fora*).

¹¹ Sabatier and Jenkins-Smith. 1997. The Advocacy Coalition Framework: An Assessment.

¹² Some agency officials and researchers may initially have no strong policy preferences. However, as conflict between coalitions increases and as beliefs become clarified over time, most neutral actors will drop out of the process. Those remaining tend to coalesce into increasing distinct coalitions with coherent belief systems.

¹³ Sabatier, Paul A. 1988. An Advocacy Coalition Framework of Policy Change and the Role of Policy-Oriented Learning Therein. *Policy Sciences* 2, Summer/Fall: 129-168; and Sabatier, Paul A. 1993. Policy Change Over a Decade or More. In *Policy Change and Learning: An Advocacy Coalition Approach*, ed. Paul A. Sabatier and Hank Jenkins-Smith. Boulder, San Francisco and Oxford: Westview Press.

¹⁴ See, e.g., Ostrom, Elinor. 1990. *Governing the Commons: The Evolution of Institutions of Collective Action*. New York: Cambridge University Press; and Schlager. 1995. Policy-Making And Collective Action - Defining Coalitions Within The Advocacy Coalition Framework.

¹⁵ For example, the pooling of resources by one group of advocates will force their opponents to do the same if they are to avoid defeat. Having allies then create pressures for common positions, which tend to harden over time.

The ACF assumes that *policy core* beliefs are the fundamental “glue” of coalitions because they represent political actors basic normative and empirical commitments on the policy area with which the subsystem is concerned.¹⁶ These shared beliefs serve to simplify the significant difficulties actors face in striving to reach a common understanding of the policy problem and the proper means of addressing it. Beliefs concerning basic value priorities and the identification of groups or entities whose welfare is of concern are particularly important, and the ACF assumes that agreement on these two normative precepts is the most important characteristic defining an advocacy coalition.

While political scientists have traditionally viewed agency officials, researchers, and journalists as being passive or policy indifferent, there is considerable evidence that they behave like other coalition members in terms of pursuing policy objectives that are consistent with their beliefs.¹⁷ Most agencies have a fairly clear overall mission which tells them to give priority to some values over others, and the officials who join the agency generally come to accept those priorities, whether out of self-selection or gradual indoctrination.¹⁸ Furthermore, agencies tend to be dominated by members of a particular profession or scientific discipline that share the norms of colleagues outside the agency and favor policies that are consistent with “best practices” as defined by their profession.¹⁹

This in turn inhibits the formation of new coalitions. (Sabatier. 1993. *Policy Change over a Decade or More*; Kingdon, John W. 1984. *Agendas, Alternatives, and Public Policies*. New York: Harper Collins Publishers).

¹⁶Sabatier notes that the ACF uses belief systems rather than economic and organizational interests as the core of coalition stability because beliefs are more inclusive and more verifiable than interests. While belief system models can incorporate self-interest and organizational interests, they also allow actors to establish goals in different ways. Interest models, on the other hand, generally fail to identify a set of means and performance indicators necessary for goal attainment, and identifying *a priori* a clear and falsifiable set of interests for most actors in policy conflicts is methodologically very difficult (Sabatier. 1993. *Policy Change over a Decade or More*).

¹⁷ Sabatier, Paul A. and Matthew A. Zafonte. 1994. *Are Bureaucrats and Scientists Members of Advocacy Coalitions? Two Models Applied to San Francisco Bay/Delta Water Project*. Davis, CA: University of California, Davis.

¹⁸For example, when procedures allow State Department advocates to write the first draft of a speech or be the last ones in the door, as they would if the President were to speak to a foreign parliament, presidential decisions reflect the views of State Department advocates. When the procedures give the same advantage to Defense Department advocates, as they would if with a speech were to be made to defense ministers, decisions favor them (Kelman. 1987. *Making Public Policy*. See also Aberbach, Joel D., Robert D. Putnam, and Bert A. Rockman. 1981. *Bureaucrats and Politicians in Western Democracies*. Cambridge, MA: Harvard University Press; Stupak, Ronald J. 1978. *Inside the Bureaucracy: The View From the Assistant Secretary's Desk*. Boulder, CO: Westview Press; Kellner, Peter and Lord Crowther-Hunt. 1980. *The Civil Service*. London: Macdonald Press; Kaufman, Herbert. 1967. *The Forest Ranger: a Study in Administrative Behavior*. Baltimore: The Johns Hopkins University Press; and Knott, Jack and Gary Miller. 1987. *Reforming Bureaucracy*. Englewood Cliffs: Prentice Hall.

¹⁹ Peters points out that, almost by definition, a professional has an internalized value structure promulgated, inculcated, and policed by the profession itself. These professional value structures place the interest of the client above that of the practitioner, and can often conflict with the values of the government as a whole. For example, one norm of the scientific profession is the free flow of information and ideas. For scientists working in a government research office, this norm conflicts with the restrictions placed on the flow of information by national security laws and regulations (Peters, B. Guy. 1989. *The Politics of Bureaucracy*. White Plains, NY: Longman Inc.). See also Gillespie, David F. 1975. Technology and the Conflict of Professionals in Bureaucratic Organizations. *Sociological Quarterly*: 319-32; Mosher, Frederick C. 1978. Professionals and the Public Service. *Public Administration Review* 38: 144-50; and Beer, Samuel H. 1976. The Adoption of General Revenue Sharing:

It should be noted here that, while agency officials generally ally themselves with that coalition holding beliefs consistent with their agency's mission, sub-units within an agency may in fact belong to different coalitions.²⁰ In addition, agency officials generally advocate more moderate positions than their NGO allies to avoid antagonizing powerful sovereigns (i.e., sources of funding or legal authority) who may hold different policy views.²¹ Individuals representing non-governmental organizations, generally unfettered by such concerns, usually adopt more extreme positions.

Scientists are also not neutral participants in the policy process. While they frequently view themselves as "objective technicians" in this process, they tend to hold a well-defined set of normative beliefs that guide their actions, and are critical players in the policy process at both the national and international levels.²² In the United States, for example, they had important roles in highlighting the problems of endangered species and helped craft the Endangered Species Act.²³

A Case Study of Public Sector Politics. *Public Policy* 24: 157-60.

²⁰For example, on certain issues of arms control, factions in the U.S. State Department are often allied with like-minded factions in the Department of Defense against rival State factions who are also allied with still other Defense factions (Hilsman, Roger. 1990. *The Politics of Policy Making in Defense and Foreign Affairs: Conceptual Models and Bureaucratic Politics*. Englewood Cliffs, NJ: Prentice-Hall, Inc). Within the U.S. Environmental Protection Agency, personnel in media-specific offices have historically tended to favor traditional command-and-control approaches to addressing environmental problems while those in policy offices, largely economists, have favored more market-oriented solutions (Rosenbaum, Walter A. 1998. *Environmental Politics and Policy*. Washington D.C.: Congressional Quarterly, Inc, 1998; Liroff, Richard. 1986. *Reforming Air Pollution Regulation: The Toil and Trouble of EPA's Bubble*. Washington, D.C.: Conservation Foundation). See also Eisner, Marc A. and Kenneth J. Meier. 1990. Presidential Control versus Bureaucratic Power: Explaining the Reagan Revolution in Antitrust. *American Journal of Political Science* 38, 11: 894-917.

²¹ Official testimony at legislative hearings tends to reflect this moderation, while anonymous responses of agency personnel to a survey are more likely to reflect the "real" agency view (Sabatier and Zafonte. 1997. *Policy-Oriented Learning Between Coalitions: Characteristics of Successful Professional/Scientific Fora*). In the United States, this trend towards moderation at the federal level is enforced by the requirement that the text of all Congressional testimony by federal employees be approved beforehand by the White House's Office of Management and Budget and all other departments within the Administration with an interest in the issue at hand.

²² The activities of most scientists are guided by a particular "paradigm," or set of assumptions, often implicit, about basic causal theories and proper methods of investigation, and almost all scientific disciplines contain normative assumptions that members tend to accept uncritically. For example, biologists tend to associate greater risks with nuclear waste disposal than do physicists, chemists and engineers. Furthermore, scientists are often drawn to applied research because they want to solve a particular problem, and the scientists who are most active regarding a particular issue are likely to be those who have been involved the longest and who are most committed to defending a particular point of view. Finally, there is a growing body of literature that shows that the topics chosen for research, the allocation of the burden of proof in areas of uncertainty, and the presentation of results are all affected by the scientists' disciplinary paradigms, organizational interests, and policy concerns. See Kuhn, Thomas S. 1962. *The Structure of Scientific Revolutions*. Chicago: University of Chicago Press; Lakatos, Imre. 1971. History of Science and Its Rational Reconstruction. *Boston Studies in the Philosophy of Science* 8: 42-134; Barke, Richard and Hank Jenkins-Smith. 1993. Politics and Scientific Expertise: Scientists, Risk Perception, and Nuclear Waste Policy. *Risk Analysis*, 10; Wildavsky, Aaron and Ellen Tenenbaum. 1981. *The Politics of Mistrust*. Beverly Hills: Sage; Palladino, Paolo. 1990. Ecological Theory and Pest Control Practice: The Institutional and Conceptual Dimensions of a Scientific Debate. *Social Studies of Science* 20: 255-281; and Yearly, Steven. 1989. Bog Standards: Science and Conservation at a Public Inquiry. *Social Studies of Science* 19: 421-438.

²³ Rosenbaum. 1998. *Environmental Politics and Policy*.

Internationally, they have been important advocates for international treaties addressing Mediterranean water pollution, stratospheric ozone depletion, and whaling.²⁴

Finally, journalist, including television and newspaper executives, reporters, editors, anchors and producers, do not see themselves as neutral “observers” of politics but rather as active participants.²⁵ As Dye points out, they “not only report events but also discover events to report, assign them political meaning, and predict their consequences. They seek to challenge government officials, debate political candidates, and define the problems of society. They see their profession as a “sacred trust” and themselves as the true voice of the people in public affairs”²⁶

Because important coalition actors active in a mature subsystem (i.e., one in which distinct coalitions with well-developed belief systems have formed) are motivated not by short-term interests but by a commitment to their policy core beliefs, Sabatier and Jenkins Smith have found that coalition membership at the national level tends to remain relatively stable over time.²⁷ This also holds true at the international level. As Haas points out, the most compelling argument for an international regime’s importance in promoting international order is the fact that compliance is achieved even when the regime’s norms and principles run counter to the short-term interests of the participants.²⁸

Political actors who are not members of a coalition may also be active in national and international subsystems. Most important among these are “policy brokers,” individuals whose primary objective is to limit the level of political conflict within the subsystem and reach some “reasonable” solution to the problem. While some brokers may also be policy advocates, others may focus solely on ensuring that the political processes within the subsystem continue to function.²⁹ High-level elected officials or civil servants frequently act as policy brokers at the national level, while diplomats, former or current heads of state, or ministerial-level officials tend to play this role in international subsystems.³⁰

²⁴ Haas, Peter M. 1989. Do regimes matter? Epistemic communities and Mediterranean pollution control. *International Organization* 43, 3: 377; Peterson, M. J. 1992. Whalers, cetologists, environmentalists, and the international management of whaling. *International Organization* 46, 1: 147-185; Haas, Peter M. 1992. Banning chlorofluorocarbons: epistemic community efforts to protect stratospheric ozone. *International Organization* 46, 1: 187-224.

²⁵ Carpenter, C. 2001. Businesses, green groups and the media: the role of non-governmental organizations in the climate change debate. *International Affairs* 77, 2: 313-+; McComas, K. and J. Shanahan. 1999. Telling stories about global climate change - Measuring the impact of narratives on issue cycles. *Communication Research* 26, 1: 30-57; Dalby, S. 1996. Reading Rio, writing the world: The New York Times and the 'Earth Summit'. *Political Geography* 15, 6-7: 593-613.

²⁶ Dye, Thomas R. 1995. *Who's Running America? The Clinton Years*. Englewood Cliffs: Prentice-Hall, Inc.

²⁷ Sabatier. 1993. Policy Change over a Decade or More.

²⁸ Haas. 1989. Do regimes matter? Epistemic communities and Mediterranean pollution control. See also Young, Oran R. 1986. International Regimes: Toward A New Theory of Institutions. *World Politics* 39, 10: 106; and Keohane, Robert O. and Joseph S. Nye. 1989. *Power and Interdependence*. Glenview, Ill: Scott, Foresman and Company.

²⁹ Sabatier and Jenkins-Smith. 1997. The Advocacy Coalition Framework: An Assessment. See also Dudley and Richardson. 1999. Competing advocacy coalitions and the process of 'frame reflection': a longitudinal analysis of EU steel policy.

³⁰ Hilsman. 1990. *The Politics of Policy Making in Defense and Foreign Affairs: conceptual models and*

3.1.3. Public Policies As Reflections of Elite Beliefs

An important premise of the ACF is that public policies and programs incorporate normative values and implicit theories about how to achieve their objectives, and can therefore be conceptualized in much the same way as belief systems. This correspondence of beliefs and policies provides a means by which the influence of various actors on policy can be assessed. This premise holds true for policies developed at the international as well as the national level.

A number of theorists that have argued that public policies involve value priorities, perceptions of important causal relationships, and perceptions of world states, including the magnitude of the problem, and perceptions of the efficacy of policy instruments.³¹ Pressman and Wildavsky suggest that the term “policy” be used to designate a more or less implicit hypothesis about what will happen if certain specified actions are taken. Policy-makers holding the normative belief that public welfare will be maximized if economic markets are permitted to function with minimal constraints will favor market-based mechanisms such as tradable emissions permits and tax incentives over regulatory approaches such as emissions standards to address environmental problems. Conversely, those holding the normative belief that economic markets cannot capture the true value of natural resources will tend to favor the regulatory approaches.³²

These premises are also true for international treaties. Puchala and Hopkins argue that a description of an international regime must include a characterization of the major principles it upholds as well as the norms that prescribe orthodox and proscribe deviant behavior.³³ Each regime has a set of elites who are the practical actors within it, and “the tenets of the regime

bureaucratic politics points out that an important role of the U.S. President is to be a political broker, mediating among the conflicting demands of the Congress, cabinet members, agency heads, individual senior bureaucrats, members of the press, interest groups, and state, local and regional leaders. Courts and special commissions may also play this role, such as the brokering role that the U.S. Special Commission on Base Closures played in determining the specific military bases to be closed as part of the post-Cold War military force reduction. At the international level, policy brokers can play roles ranging from conventional mediators to interveners with both interests and power. For example, Terje Larsen, the head of a Norwegian NGO trained in conflict resolution acted as a broker in 1993 during the secret discussions between Israel and the PLO that gave rise to the Oslo Peace Process (Watkins, M. and K. Winters. 1997. Interveners with interests and power. *Negotiation Journal-On the Process of Dispute Settlement* 13, 2: 119-142). President Clinton, Secretary of State Madeline Albright, and a number of other U.S. officials have played this role since then. Conference chairs and Secretariats can also be important policy brokers.

³¹Sabatier. 1993. The Advocacy Coalition Framework. See also Pressman, Jeffrey L. and Aaron Wildavsky. 1973. *Implementation*. Berkeley: University of California Press; Majone, Giandomenico. 1980. Policies as Theories. *Omega* 8: 151-162; Kratochwil, Friedrich. 1989. *Rules, Norms and Decisions*. Cambridge: Cambridge University Press; Garrison, J. A. 2001. Framing foreign policy alternatives in the inner circle: President Carter, his advisors, and the struggle for the arms control agenda. *Political Psychology* 22, 4: 775-807; Richardson, Jeremy. 2000. Government, interest groups and policy change. *Political Studies* 48, 5: 1006-1025; and Drezner, D. 2000. Ideas, bureaucratic politics, and the crafting of foreign policy. *American Journal of Political Science* 44, 4: 733-749.

³² See, e.g.,; Castree, N. 2002. Environmental issues: from policy to political economy. *Progress in Human Geography* 26, 3: 357-365; Kirchgassner, G. and F. Schneider. 2003. On the political economy of environmental policy. *Public Choice* 115, 3: 369-396; McDonnell, G. 1997. Scientific and everyday knowledge: Trust and the politics of environmental initiatives. *Social Studies of Science* 27, 6: 819-863.

³³ As was noted in footnote 2 of Chapter 1, a regime is defined here as the implicit or explicit principles, norms, rules and decision-making around which actors' expectations converge in a given area of international relations.

come to match the values, objectives, and decision-making procedures of the pre-eminent participant or participants.”³⁴ This consistency provides a means by which the international and domestic policy dynamics can be examined and the influence of one on the other assessed.

3.2 INTERNATIONAL, NATIONAL, AND SUB-NATIONAL POLICY SUBSYSTEMS

These many different political actors and coalitions interact within distinct policy subsystems to formulate public policies. Although the concept of the policy subsystem was developed to describe domestic policy processes, there is much in the international relations literature that suggests that international treaty negotiations can be treated as occurring within subsystems analogous to those at the national level. Thus the subsystem becomes a unit of analysis through which the international and national policy processes can be linked.

Sabatier and Jenkins-Smith define a policy subsystem as the set of actors involved in addressing a policy problem such that:

- The participants regard themselves as a semi-autonomous community who share a domain of expertise;
- Participants regularly or periodically seek to influence public policy within this domain over a fairly long period of time, i.e., 7-10 years;
- There exist specialized sub-units within agencies at all relevant levels of government to deal with policy within the domain; and,
- There exist interest groups, or specialized sub-units within interest groups, which regard the substantive policy area as a major policy topic.³⁵

Subsystems also have a functional and a territorial component, as the policies formulated within them generally serve specific function and some form of jurisdictional limit.³⁶ Thus several different subsystems can be delineated at the national, sub-national and international levels that are addressing different aspects of a given problem area.

³⁴Puchala, Donald J. and Raymond F. Hopkins. 1983. International Regimes: Lessons From Inductive Analysis. In *International Regimes*, ed. Stephen D. Krasner, pg. 369. Ithaca: Cornell University Press. See also Mitchell, R. B. 2003. International environmental agreements: A survey of their features, formation, and effects. *Annual Review of Environment and Resources* 28: 429-461; Auer, M. 2000. Who participates in global environmental governance? Partial answers from international relations theory. *Policy Sciences* 33, 2: 155-180; Allison, J. E. 1999. Fortuitous consequence: The domestic politics of the 1991 Canada-United States agreement on air quality. *Policy Studies Journal* 27, 2: 347-359; Bernstein, S. 2002. International institutions and the framing of domestic policies: The Kyoto Protocol and Canada's response to climate change. *Policy Sciences* 35, 2: 203-236.

³⁵According to Sabatier and Jenkins-Smith, this rather careful delineation is necessary because the scope of a subsystem is the critical element that distinguishes the three levels of values and precepts that comprise the elite belief system (Sabatier and Jenkins-Smith. 1997. *The Advocacy Coalition Framework: An Assessment*).

³⁶For example, an “agricultural subsystem” in the United States must be defined as either the U.S. national agriculture or California agriculture. However, each can be intergovernmental in nature, and the same individuals may participate in both (Zafonte, Matthew A. and Paul A. Sabatier. 1998. Shared beliefs and imposed interdependencies as determinants of ally networks in overlapping subsystems. *Journal of Theoretical Politics* 10, 4: 473-505).

3.2.1. National Policy Subsystems

Several different national policy subsystems are generally involved in the development and implementation of international environmental treaties. At a minimum, there exists a national foreign policy subsystem through which foreign policies are developed. Depending on the issue area, several national domestic policy subsystems, as well as several some sub-national policy subsystems, may also be involved in implementation process.

The National Foreign Policy Subsystem

The national foreign policy subsystem is comprised of the set of actors involved in setting the nation's foreign policy with regard to the issue, or set of issues, relevant to the environmental treaty in question and conveying that policy to the international community. National delegations, which represent the country in negotiating sessions, are generally drawn from a subset of subsystem actors, and it is the policies established within this subsystem that are the "national positions" put forth by the delegation in the negotiations.

A broad range of actors can be involved in foreign policy subsystems that deal with international issues. In most countries, officials from foreign ministries have traditionally been the dominant players, as the role of these ministries is to represent the country in international relations. However, because most foreign ministry personnel tend to lack expertise in the substance of environmental issues, personnel from environment ministries have taken on an increasingly important role. Personnel from energy, agriculture, economic ministries and other ministries and agencies may also participate in the subsystem, as may members of the legislature.³⁷ Finally, representatives from interest groups are also active participants in the foreign policy process in many countries.³⁸

This broad range of actors can make managing the policy formulation process difficult. As Crowe observes:

"The trick in the process is to ensure that all views are properly taken into account in the discussion. This sounds like obvious common sense, but it is surprising how often it does not take place in various countries. Governments often consist of competing baronies, and all the more so in countries in which formal responsibility for a subject is laid on the departmental minister, not on the prime minister or the government as a whole. One of the things which the new republics in the former Soviet Union genuinely find very difficult is precisely the coordination of policy into a single approach and the sharing of information. Consultation is a habit of mind which has to be deliberately fostered. Information is power and withholding important information from others

³⁷ Because foreign policy is generally regarded as an executive or administrative function, participation by members of the legislature may be limited. In the United States, for example, the power to make foreign policy rests solely with the President. While the Senate must provide its advice and consent if the United States is to become a Party to an agreement, participation by members of Congress or their representatives in the foreign policy formulation process itself is limited. They may join delegations as observers only, and, while they may be briefed or otherwise consulted, generally do not active participants in the interagency process through which the policy itself is developed.

³⁸ Mathews, Jessica Tuchman. 1997. Power Shift. *Foreign Affairs* 76, 1: 50-66; Raustiala, Kal. 1997. States, NGOs, and international environmental institutions. *International Studies Quarterly* 41, 4: 719-740; Raustiala, Kal. 1997. The "participatory revolution" in international environmental law. *Harvard Environmental Law Review* 21, 2: 537-586.

who might take a different view confers advantage in turf fights.”³⁹

Most countries have established specialized offices to generally handle the procedural issues associated with formulating foreign policy on environmental issues.⁴⁰ These are most frequently located within the foreign ministry.⁴¹ In the United States, for example, the State Department’s Bureau of Oceans and International Environmental and Scientific Affairs (OES) coordinates U.S. foreign policy on international environmental issues. However, these offices may also be located in the environment or other ministry, or the Chief of State’s office.

National Domestic Policy Subsystems

One or more national domestic policy subsystems may also be involved in the implementation of international environmental agreements. In the United States, the President, through the various departments and agencies of the executive branch, is responsible for carrying out the laws passed by Congress. If the United States signs a treaty requiring it to take specific actions, Congress must pass implementing legislation authorizing the President to carry out those actions before he can formally ratify the treaty. In the case of the Montreal Protocol, for example, Congress provided the requisite implementing legislation with the passage of the 1990 Clean Air Act. This Act required the President, through EPA, the Department of Commerce, the Department of Agriculture, and other agencies, to implement the CFC phase out in the United States.

3.2.2. Subnational Policy Subsystems

The implementation of international environmental agreements may involve, in addition to national policy subsystems, one or more subnational policy subsystems. This occurs most frequently in countries such as the United States and Germany that have federal, or decentralized, political systems. Subnational political entities such as states are often responsible for transportation and land use policies and energy distribution policies. Even in those countries such as Japan that have fairly strong central governments, local governments may have authority

³⁹Crowe, Brian L. 1993. Foreign Policy-Making: Reflections of a Practitioner. *Government and Opposition* 28, Spring: 175-189.

⁴⁰Procedural processes here include, for example, the initial drafting of position papers, circulating papers for comment, chairing meetings, etc. For example, Crowe. 1993. Foreign Policy-Making: Reflections of a Practitioner states that, in the UK, the process consists of the lead department preparing a paper on the issues, usually in consultation with other interested departments, followed by a discussion and inter-departmental negotiation, if necessary up to Cabinet level, until there is agreement on national objectives and priorities. As international negotiations proceed the same process can take place to modify a national position to take account of changed circumstances. Lang points out that internal coordination at the negotiating site may often be easier to accomplish than back home because all the participants are more intensely involved in the development of the negotiation, the give and take, the submission of new proposals, and the introduction of compromise formulae, and are less exposed to domestic political influences (Lang, Winfried. 1996. Negotiation as Diplomatic Rule-Making. *International Negotiation* 1: 65-78).

⁴¹Most international negotiations involve factors outside the immediate issues at hand that need to be taken into account, notably political and economic objectives involving other international priorities. The job of a foreign ministry is to provide and coordinate this kind of input. Foreign offices around the world are reorganizing in order to respond to the much greater importance given to functional as opposed to geographical issues and to the offices within the foreign ministry dealing with them (Crowe. 1993. Foreign Policy-Making: Reflections of a Practitioner).

over local land use and facility permitting decisions that are relevant to international environmental issues.

3.2.3. International Policy Subsystems

There is much in the international relations literature that suggests that the concept of the policy subsystem can be applied at the international level as well. Much of diplomacy, and conference diplomacy in particular, focuses on negotiating agreements among nations, the outcomes of which are international regimes.⁴² Much in the literature on international regimes, which Krasner defines as the “sets of implicit or explicit principles, norms, rules, and decision-making procedures around which actors’ expectations converge in a given area of international relations”, suggests that they can be considered the international analogue to public policy at the national and sub-national levels.⁴³ For example, the international negotiations process has been described as “diplomatic rule-making,” producing not only legal commitments (“hard law”) but political and moral commitments (“soft law”) as well.⁴⁴

Like subsystems at the national and subnational levels, the international bodies within which environmental treaties are negotiated, and the treaties themselves, have specific functional and territorial components.⁴⁵ Participants in international treaty negotiations tend to form a semi-autonomous community with a particular domain of expertise. Linkages among issue areas at the international level tend to be relatively weak, and hierarchies among treaties or

⁴²Conference diplomacy, which Kaufmann defines as “the management of relations between governments and of relations between governments and intergovernmental organizations that takes place in international conferences,” has among its objectives: (1). to make non-binding recommendations to governments or international organizations; (2). to make decisions binding upon governments; (3). to make decisions giving guidance or instructions to the secretariat of an intergovernmental organization; (4). to negotiate a treaty or other formal international agreement; and (5). to provide for the international exchange of information; (6). to provide for the pledging of voluntary contributions to international programs. Each of these decisions are also policy outcomes. (Kaufmann, Johan. 1988. *Conference Diplomacy: An Introductory Analysis*. Dordrecht: Martinus Nijhoff).

⁴³ This definition is consistent with a number of other formulations (Krasner, Stephen D., ed. 1983. *International Regimes*. Ithaca: Cornell University Press). Keohane and Nye, for instance, describe a regime as sets of governing arrangements that include “networks of rules, norms, and procedures that regularize behavior and control its effects,” (Keohane and Nye. 1989. *Power and Interdependence*). Haas defines a regime as encompassing a mutually coherent set of procedures, rules and norms (Haas, Ernst B., May Pat Williams, and Don Babai. 1978. *Scientists and World Order: The Uses of Technical Knowledge in International Organizations*. Berkeley, CA: University of California Press).

⁴⁴Legal commitments, or “hard law,” are usually found in international treaties, which are defined as “international agreement(s). concluded between states in written form and governed by international law.” A state that does not comply with a legal commitment incurs a “state responsibility” to remedy the situation and/or provide compensation. Political or moral commitments, or “soft law,” are generally contained in documents such as declarations or statements. A state that does not comply with a political or moral commitment primarily risks blame by public opinion and, at worst, retaliation from other countries that consider the deviant behavior as an “unfriendly act” (Lang. 1996. *Negotiation as Diplomatic Rule-Making*).

⁴⁵ See, e.g., Beyers, J. and G. Dierickx. 1998. The working groups of the Council of the European Union: Supranational or intergovernmental negotiations? *Journal of Common Market Studies* 36, 3: 289-317; Christiansen, T. 2002. The role of supranational actors in EU treaty reform. *Journal of European Public Policy* 9, 1: 33-53; de Senarclens, Pierre. 1993. Regime theory and the study of international organizations. *International Social Science Journal* 45, 4: 453-462; Abbott, K. W. and Duncan Snidal. 1998. Why states act through formal international organizations. *Journal of Conflict Resolution* 42, 1: 3-32.

intergovernmental organizations are difficult to establish.⁴⁶ In some cases, such as in that of the FCCC, the U.N. General Assembly or some other intergovernmental organization may authorize the establishment of a intergovernmental negotiating body and maintain a certain degree of authority over the process until an agreement enters into force. Once negotiated, however, most treaties are self-standing international instruments independent of the U.N. Charter, and the negotiating body itself generally authorizes both the operations of its secretariat and the procedures and rules under which the negotiations are conducted.

A wide range of actors are generally involved in the international negotiations process. The primary participants in these negotiations are national delegates, the secretariat and its executive head, and the presiding officers.⁴⁷ Particularly important are the heads of delegations, as it is these individuals who are given 'full powers' to represent the State for negotiating a treaty.⁴⁸ Representatives of international organizations, non-governmental organizations, and journalists are also significant players in the process.

These different players generally coalesce into a number of distinct groups or coalitions. While traditionally forming along subregional, regional lines or North-South lines, those that are most effective are comprised of actors with similar beliefs.⁴⁹ Cooperation occurs among non-government organizations, between non-government organizations and government agencies and among similar government agencies in different countries.⁵⁰

⁴⁶ Keohane and Nye. 1989. *Power and Interdependence*; Kaufmann. 1988. *Conference Diplomacy: An Introductory Analysis*.

⁴⁷ Kaufmann. 1988. *Conference Diplomacy: An Introductory Analysis*.

⁴⁸ Traditionally, international negotiations have been conducted by professional diplomats (i.e., officials from foreign ministries who specialize in foreign policy and diplomacy), as these persons have generally have expertise in negotiations and knowledge of the full range of their nation's interests. More recently, however, delegations are often headed by a minister or policy official from the ministry or agency most closely associated with the negotiation's subject area, with the delegation itself consists mostly of personnel from the delegation head's ministry or agency. The World Health Organization constitution requires, for example, that heads of delegations to the annual World Health Assembly be persons responsible for public health, and the World Meteorological Organization requires that Permanent Representatives to that organization be officials of national meteorological offices. A number of international agreements have been negotiated by delegations composed exclusively of these experts. For example, under the auspices of the Economic Commission for Europe (ECE), experts meet in subcommittees or working parties to negotiate international standards for motor vehicles or regulations for the registration of inland vessels (Kaufmann. 1988. *Conference Diplomacy: An Introductory Analysis*).

⁴⁹ Dubey. 1985. *The Main Forces at Work*; Kaufmann. 1988. *Conference Diplomacy: An Introductory Analysis*.

⁵⁰ See, e.g., Dolan. 2003. Economic policy and decision making at the intersection of domestic and international politics: The advocacy coalition framework and the National Economic Council; Warleigh, A. 2000. The hustle: citizenship practice, NGOs and 'policy coalitions' in the European Union - the cases of Auto Oil, drinking water and unit pricing. *Journal of European Public Policy* 7, 2: 229-243; Newell, P. and Matthew Paterson. 1998. A climate for business: global warming, the state and capital. *Review of International Political Economy* 5, 4: 679-703; Kwon, Gi-Heon. 1995. Transnational Coalitions Among Societal State and International Actors: GM Ford and Hyundai in the Canadian Anti-Dumping Case. *World Economy* 18, 6: 805; Tucker, J. B. 1996. Interagency bargaining and international negotiation: Lessons from the open skies treaty talks. *Negotiation Journal-On the Process of Dispute Settlement* 12, 3: 275-288; Risse-Kappen, Thomas. 1994. Ideas Do Not Float Freely - Transnational Coalitions, Domestic Structures, and the End of the Cold War. *International Organization* 48, 2: 185-214.

Most treaty negotiations also span significant periods of time or are on-going processes.⁵¹ For example, negotiations for the 1982 UN Convention on the Law of the Sea spanned a period of ten years.⁵² Although the Antarctic Treaty entered into force in 1961, additional sub-treaties and protocols were developed in 1964, 1972, 1980, and 1988.⁵³ International trade negotiations related to the General Agreement on Tariffs and Trade (GATT) have been ongoing since 1947, as have negotiations related to the International Convention for the Regulation of Whaling (IWC).⁵⁴

The international analogue to the specialized government units established at the national and sub-national levels to deal with subsystem issues is generally the treaty Secretariat, an office established by the negotiating body to deal with procedural issues associated with the negotiations. While the primary role of this office may be to organize meetings of the negotiating body or bodies and prepare documents required for the negotiations, it may also play a more substantive role in the negotiations themselves, such as collecting compliance information and providing legal interpretations.⁵⁵

Secretariats also play an important role in the international learning process. They generally disseminate a wide range of information regarding the regime to both governments and the general public.⁵⁶ They also function as a liaison between the negotiating body and various international research and assessment groups (e.g., the IPCC) that have been established to conduct and assess scientific research on issues relevant to the regime.⁵⁷

Finally, interest groups, or specialized sub-units within interest groups, exist at the international level that regard the various international environmental issues being discussed as a major policy topic.⁵⁸ Non-governmental organizations have been part of the UN system since its

⁵¹Young describes international regimes as undergoing “continuous transformations in response to their inner dynamics as well as to changes in their political, economic, and social environments.” (Young, Oran R. 1983. *Regime Dynamics: the Rise and Fall in International Regimes*. In *International Regimes*, ed. Stephen D. Krasner, pg. 369. Ithaca: Cornell University Press).

⁵² Richardson, Elliot L. 1992. *Climate Change: Problems of Law-Making*. In *International Politics of the Environment*, ed. Andrew Hurrell and Benedict Kingsbury, pg. 166-179. New York: Oxford University Press.

⁵³ Susskind. 1994. *Environmental Diplomacy: Negotiating More Effective Global Agreements*.

⁵⁴ Finlayson, Jock and Mark Zacher. 1981. The GATT and the regulation of trade barriers: regime dynamics and functions. *International Organization* 35, 4; Susskind. 1994. *Environmental Diplomacy: Negotiating More Effective Global Agreements*.

⁵⁵ Kaufmann. 1988. *Conference Diplomacy: An Introductory Analysis*.

⁵⁶ For example, the website of the FCCC Secretariat contains a broad range of information regarding climate change, the climate change regime, and the countries that are party to the agreement. It also provides links to other websites from which additional information can be obtained.

⁵⁷ See, e.g., Clark, W. C., J. van Eindhoven, and Jill Jaeger, eds. 1999. *Learning to Manage Global Environmental Risks: A Comparative History of Social Responses to Climate Change, Ozone Depletion and Acid Rain*. Cambridge, MA: MIT Press; Haas, Peter M. 2000. International institutions and social learning in the management of global environmental risks. *Policy Studies Journal* 28, 3: 558-575; Ulph, A. and D. Maddison. 1997. Uncertainty Learning and International Environmental Policy Coordination. *Environmental & Resource Economics* 9, 4: 451.; Knopf, J. W. 2003. The importance of international learning. *Review of International Studies* 29: 185-207.

⁵⁸ See, e.g., Keck, Margaret and Kathryn Sikkink. 1998. *Activists Beyond Borders: Advocacy Network in International Politics*. Ithaca: Cornell University Press; Weber and Christophersen. 2002. The influence of non-governmental organizations on the creation of Natura 2000 during the European Policy process; Carpenter. 2001. Businesses, green groups and the media: the role of non-governmental organizations in the climate change debate; Wapner, P.

inception in 1945, and have become increasingly influential regarding international environmental issues since the UN Conference on the Human Environment in Stockholm in 1972.⁵⁹ A number of NGOs maintain large professional staffs and produce extensive, well-researched policy papers that contribute both to the regime and to government positions regarding it. They also provide an important oversight function, monitoring implementation and flagging instances of non-compliance.⁶⁰

1995. Politics Beyond the State - Environmental Activism and World Civic Politics. *World Politics* 47, 3: 311-340; Victor, David G., Kal Raustiala, and Eugene B. Skolnikoff, eds. 1998. *The Implementation and Effectiveness of International Environmental Commitments: Theory and Practice*. Cambridge, MA: MIT Press; Chayes and Chayes. 1995. *The New Sovereignty: Compliance with International Regulatory Agreements*; Bramble, Barbara J. and Gareth Porter. 1992. Non-Governmental Organizations and the Making of U.S. International Environmental Policy. In *The International Politics of the Environment: Actors, Interests, and Institutions*, ed. Andrew Hurrell and Benedict Kingsbury, pg. 228. New York: Oxford University Press; Campbell, M. M. 1998. Schools of thought: An analysis of interest groups influential in international population policy. *Population and Environment* 19, 6: 487-512; Risse-Kappen, Thomas and Ian Bringing Manners. 1997. Transnational Relations Back In: Non-state Actors, Domestic Structures and International Institutions. *Political Studies* 45, 1: 138.

⁵⁹ Non-governmental organizations (NGOs) are defined here as those organizations, including trade or business associations, engaged in lobbying and advocacy, direct political or social action, or policy work (Raustiala. 1997. States, NGOs, and international environmental institutions). See e.g., Raustiala. 1997. The "participatory revolution" in international environmental law.

⁶⁰ For example, Greenpeace and others have devoted significant resources to monitoring the whaling agreements (Peterson. 1992. Whalers, cetologists, environmentalists, and the international management of whaling), while the Natural Resources Defense Council (NRDC) has conducted assessments of state compliance with UNCED pledges. Within CITES, TRAFFIC International has been instrumental in tracking the wildlife trade and evaluating the progress of the regime (Raustiala. 1997. The "participatory revolution" in international environmental law). Several business organizations, including the Global Climate Coalition and the Climate Council, were established specifically to monitor issues involving the climate change treaty negotiations (Levy, D. L. and D. Egan. 2003. A neo-gramscian approach to corporate political strategy: Conflict and accommodation in the climate change negotiations. *Journal of Management Studies* 40, 4: 803-829).

CHAPTER 4 - STRATEGY, POWER AND COALITION DOMINANCE

The degree to which the policies emanating from a given policy subsystem reflect a coalition's belief system depends very much on the extent to which that coalition is able to dominate that subsystem. A coalition's ability to dominate the subsystem is in turn determined by the political resources it possesses and the political constraints it faces. A substantial body of literature exists on various aspects of these resources and constraints. However, the relationship between these resources and constraints and coalition dominance however has not been well developed in the context of the ACF.

A useful way of looking at the political resources and constraints is to view them as sources of political power. A coalition has political power within a subsystem if, for example, it has the authority to make decisions or is able to offer inducements to other actors in exchange for their cooperation. The range and effectiveness of the various strategies, approaches and tools (guidance instruments) that a coalition can employ in the pursuit of its objectives are ultimately defined by the coalition's sources of power. These sources of power are thus important factors in determining the extent to which a coalition dominates, or has the potential to dominate, a subsystem. Furthermore, not all sources of power are equal. Each is constrained by both its particular nature and system-wide parameters such as socio-economic conditions and the system's legal structure.

4.1 GUIDANCE INSTRUMENTS

Political actors use different approaches, strategies and tools, or what Sabatier calls "guidance instruments," at different points in the policy process to effect decisions. In national and sub-national subsystems, most of these strategies and tools are directed towards the administrative agency (or other administrative unit) responsible for the issue in question. Some instruments, such as testimony, media events, or the release of reports, directed towards the agency's decision-making process itself. Others attempt to influence this process indirectly by appealing to processes in other subsystems that control the agency's budget and legal authority.

Table 4.1 list the principle guidance instruments available at the national and sub-national levels along with estimates of their costs and efficacy.¹ According to Sabatier, a critical factor in a coalition's choice of instrument is the costs associated with employing that instrument successfully. These costs are determined primarily by the number of veto points involved and whether or not the actors occupying those veto point are members of or sympathetic to the coalition.² For example, a simple agency or court decision may involve a single veto point, while obtaining a change in law or an agency's budget may involve five or more veto points in several different subsystems. Pursuing the former would entail much a lower cost than attempting to achieve the latter. These costs are also very much a function of the receptivity of the persons

¹In compiling this list, Sabatier and Jenkins-Smith suggest that the range of instruments is much broader than simply changing the legal rules affecting the agency, an approach that has been the focus of most institutional choice theorists (e.g., Ostrom. 1990. *Governing the Commons: The Evolution of Institutions of Collective Action*).

² Sabatier. 1993. Policy Change over a Decade or More.

whom the coalition is seeking to influence. If they are sympathetic, the costs tend to be low to moderate; if they are opposed, the costs are high to impossible.

Table 4.1 National-level Guidance Instruments, their Cost and Efficacy

Guidance Instrument	Probable Costs When Decision-Makers are:			Probable Efficacy		
	Supportive/ Coalition Members	Neutral/mixed	Opposed	Scope	Duration	Lag Time
Intra-subsystem Instruments						
1. Persuade through testimony	Low	Low	Moderate	Low	Low	Short
2. Change personnel making decision via transfer or reorganization	Low	Moderate	High	Low to high	Low	Short
3. Change professional background of agency staff	Low	Moderate	High	High	High	Long
4. Obtain media publicity	-	Low	Low	Low to moderate	Low	Short
5. Provide research reports	Low	Moderate	High	Varies	Varies	Long
6. Pursue major changes in legislation/legal authority	Moderate	High	Impossible	High	High	Short to moderate
7. Pursue major changes in agency's budget	Moderate	High	Impossible	Moderate to high	Low	short
8. Offer inducements (e.g., bribes)	Low	High	High	Low	Low	Short
Inter-subsystem Instruments						
1. Conduct systematic review of agency rules	Low	Moderate	High	Low to moderate	Low to moderate	Short
2. Alter political appointees	Low	Low	High	Low to moderate	Low	Low
3. Pursue litigation	Moderate to high	-	-	Usually low	Varies	Short to moderate
4. Pursue major changes in legislation/legal authority	Low	Moderate	High	Moderate	Low to moderate	Short
5. Pursue major changes in agency's budget	Low	Moderate	High	Low to moderate	Low	Short
System-wide Instruments						
1. Pursue electoral strategy	-	High	Very high	?	High	Long
2. Change public opinion	Moderate	High	Very high	Varies	Varies	Long
3. Alter target behavior through demonstrations/boycotts	Moderate	High	Very high	Varies	Varies	Long

Source: Sabatier and Jenkins-Smith (1993); Sabatier (1997)

In addition, the efficacy of most instruments is roughly proportional to their cost.³ While testimony at an agency hearing may be a low-cost effort, the scope of most agency decisions is quite narrow and duration of the decision's impact fairly short. In contrast, obtaining a major change in a law, while much more effective in terms of lasting policy change, is generally extremely difficult and expensive.⁴ Thus a coalition's choice of guidance instrument, and the range of instruments from which it can choose, is heavily dependent on the political resources it has available.

Table 4.4 lists the guidance instruments available at the international level, the costs associated with them, and their efficacy. Coalitions have far fewer guidance instruments available to them at this level because of the unique characteristics of international subsystems and the nature of the international system itself. For example, the autonomous nature of most international subsystems limits the extent to which a coalition can employ inter-subsystem instruments, such as appeals to other international subsystems for changes in rules, legal authority or budgets. The number of potential veto points within international subsystems is also substantially higher than in most national and sub-national subsystems because decision-making authority is shared among all participating delegations. This increases the political costs associated with using those instruments that are available. Replacing enough individual decision-makers (i.e., delegation heads) or their staffs to alter a decision would be a difficult, if not impossible, task, for example. In a similar vein, the large number of delegations generally involved in international environmental negotiations makes the costs associated with offering inducements much higher than in most national and sub-national subsystems.

4.2 POLITICAL RESOURCES AND SOURCES OF POWER

The ability of a subsystem coalition to achieve its political objectives is a function of the political resources that it has at its disposal at any given time. These resources may also be thought of as political power. Power can be defined in political terms as having the ability to affect the content of political choices.⁵ In the context of the ACF, the coalition that has the most

³The efficacy of a guidance instrument can be measured in terms of both its scope and duration and the lag time until it becomes effective. Testifying at a hearing can only change the agency's decision, which is likely to be fairly narrow in scope and perhaps of relatively short duration. Changes in law, on the other hand, tend to be much broader in scope and much longer in duration. Similarly, the long lag times involved in producing a report or attempting to alter public opinion can render these approaches ineffective if events evolve relatively quickly.

⁴ This is particularly true in systems, such as in the United States, in which decision-making authority is diffuse (Moe, Terry. 1990. Political Institutions: the Neglected Side of the Story. *Journal of Law, Economics and Organization* 6: 213-253).

⁵ Kelman. 1987. *Making Public Policy*. It must be noted here that a number of different conceptions of power exist in the vast literature of political power. Some adopt Weber's classic view of power in which the potential to act is more important than the act itself (e.g., Mills, C. Wright. 1956. *The Power Elite*. New York: Oxford University Press; Dye. 1995. *Who's Running America? The Clinton Years*; Schultze, Robert O. 1961. The Bifurcation of Power in a Satellite City. In *Community Political Systems*, ed. Morris Janowitz. Glencoe: Free Press). Power is the capacity or potential of persons in certain roles to make decisions that affect the conduct of others in the social system. Others distinguish between the 'potential' for power and 'actual' power, which requires active participation in decision-making. (e.g., Dahl, Robert A. 1958. Critique of the Ruling Elite Model. *American Political Science Review* 52, 6: 66; Polsby, Nelson. 1963. *Community Power and Political Theory*. New Haven: Yale University Press; Walker, Jack L. 1966. A Critique of the Elitist Theory of Democracy. *American Political*

power within a subsystem can be expected to have the most substantial effect on the content of the political choices within the subsystem. Thus the extent to which a coalition dominates a

Guidance Instrument	Probable Costs When Decision-Makers are:			Probable Efficacy		
	Supportive/ Coalition Members	Neutral/mixed	Opposed	Scope	Duration	Lag Time
Intra-subsystem Instruments						
1. Persuade through speeches/interventions	Low	Moderate	High	Low	Low	Short
2. Obtain media publicity	-	Low	Low	Low to moderate	Low	Short
3. Provide research reports	Low	Moderate	High	Varies	Varies	Long
4. Pursue major changes in treaty/legal authority	Moderate	High	Impossible	High	High	Short to moderate
5. Pursue major changes in Secretariat's budget	Moderate	High	Impossible	Moderate to high	Low	short
6. Offer inducements/linkages	Moderate	High	Impossible	Low	Low	Short
Inter-subsystem Instruments						
1. Alter conference Leadership	Moderate	High	Impossible	Low to moderate	Low	Low
2. Pursue major changes in Secretariat's budget	Moderate	High	Impossible	Low to moderate	Low	Short
System-wide Instruments						
1. Change public opinion	Moderate	High	Impossible	Varies	Varies	Long
2. Alter target behavior through demonstrations/ boycotts	Moderate	High	Impossible	Varies	Varies	Long

subsystem depends on the relative power that coalitions within each subsystem possess.

Science Review 60, 6: 286). "A has power over B to the extent that he can get B to do something that B would not otherwise do." (Dahl, Robert A. 1957. *The Concept of Power. Behavioral Science* 2: 202). Dowding makes a further distinguish between *outcome power*, or the ability of an actor to bring about or help to bring about outcomes, and *social power*, which is the ability of an actor to change deliberately the incentive structure of another actor or actors to bring about to help to bring about outcomes (Dowding, Keith. 1996. *Power*. Minneapolis, MN: University of Minnesota Press).

Kelman suggests a typology of power resources that is useful for integrating into the concept of power into the ACF.⁶ He suggests that political actors have five general sources of political power:

- Formal authority to make decisions;
- Contingent inducements to influence other participants;
- Persuasiveness;
- Deference from other participants; and
- Strategic skills.

Some aspects of these power resources are derived from system-wide parameters, such as societal rules that grant them formal authority to make decisions. Others, such as persuasiveness or strategic skills, may be a function of their unique characters or capabilities. Still others may be derived not by any individual actor, but by the collection of actors working together as a coalition. The relative value of these sources of power is dependant on a variety of parameters, including the particular circumstances in which they are used.

4.2.1. The Power of Decision-Making Authority

The formal authority to make decisions is a critical source of power in subsystems at all levels. Formal decision-making authority is the power to make decisions that are viewed as law-bound and legitimate by others.⁷ Actors with the authority to decide the substance of a policy can ensure that the policy reflects his or her beliefs and can veto unacceptable policy outcomes. Having the authority to decide procedural and administrative issues is also important, as those who control the process through which decisions are made have the power to block decisions or even prevent issues from being discussed.⁸ Finally, decision-making authority includes the power to make “non-decisions,” which can be as important as decisions.⁹

⁶ Kelman’s approach does not differ significantly from other typologies that can be found in the literature. Harsanyi, for example, suggests four sources of power: knowledge or information, legitimate authority, unconditional incentives to affect the interests of others, and conditional incentives to affect the interests of others (Harsanyi, J. D. 1976. *Measurement of Social Power in N-Person Reciprocal Power Situation*. In *Essays on Ethics, Social Behavior and Scientific Explanation*. Dordrecht: Reidel). Dowding adds reputation to this list (Dowding. 1996. *Power*).

⁷ It is this decision-making authority that is embodied in Downs’ concept of a “sovereign,” or decision-maker (Downs, Anthony. 1966. *Inside Bureaucracy*. Boston: Little, Brown). Actions motivated by this mixed notion of force and compliance are explained by legal theorists as being “content-independent,” that is, the reasons carrying out actions are independent of the content of those actions. As Dowding put it, ‘I do what you say, not because what you say is what I think is right, but because I think it right that what you say is the right thing to do. However, my acceptance of your authority may be undermined if you continually order me to carry out actions which I think are wrong, or which continue to have bad consequences’ (Dowding. 1996. *Power*). See also Green, L. 1988. *The Authority of the State*. Oxford: Clarendon Press; Hart, H. L. A. 1982. *Essays on Bentham*. Oxford: Clarendon Press; and Raz, J. 1986. *The Morality of Freedom*. Oxford: Clarendon Press.

⁸ For example, secretariats and presiding officers in multilateral negotiations can shape the direction of the debate by setting the agenda and determining when debate on a particular issue has ended (Berridge, G. R. and A. Jennings, eds. 1985. *Diplomacy at the UN*. New York: St. Martin’s Press). See also Tallberg, J. 2003. The agenda-shaping powers of the EU Council Presidency. *Journal of European Public Policy* 10, 1: 1-19; Kaufmann. 1988. *Conference Diplomacy: An Introductory Analysis*. Kille, K. J. and R. M. Scully. 2003. Executive heads and the role

In certain situations, several individuals within a subsystem can hold joint, or shared, decision-making authority. Joint decision-making occurs when “all actors participate in determining the decisions of each actor. It implies that there was interaction between all the actors prior to the decisions and that this interaction shaped the decision of each actor.”¹⁰ In these situations, the actual decision-making authority held by each individual is relatively small, as its use is dependent on the cooperation of all the other individuals sharing it.

In subsystems at the national and subnational levels, an individual or group of individuals generally has decision-making authority over the policy outcome. This power generally resides in the legislature if the policy emerges in the form of a new or amended law.¹¹ However, their ability to freely exercise this authority is often constrained by political pressures brought about by others with political power, including individuals wielding similar decision-making powers in other subsystems who can institute policies which negate or otherwise influence the desired policy outcome. A tremendous amount of decision-making authority resides with agency bureaucrats, who are relatively free of such procedural constraints as rules concerning free discussion and voting and do not need to be as sensitive to the political pressures that may be coming from constituents in making their decisions.¹²

Unlike subsystems at the national level, decision-making authority at the international levels is shared among multiple actors, making it much more diffuse.¹³ In the international negotiations from which treaties emerge, the principle of sovereignty dictates that decision-making authority is shared among the heads of all delegations participating in the discussions.¹⁴

of intergovernmental organizations: Expansionist leadership in the United Nations and the European Union. *Political Psychology* 24, 1: 175-198.

⁹ Berle observes that elites “are in positions to make decisions having major consequences. Their failure to make a decision, is itself an act that is often of greater consequence than the decisions they do make.” Just as A has power over B when he or she can influence B’s behavior, A has power over B when he or she succeeds in suppressing issues that might in their resolution be detrimental to A’s preferences (Berle, Adolf A. 1967. *Power*. New York: Harcourt Brace Jovanovich). See also Bachrach, Peter and Morton S. Baratz. 1967. Decisions and Non-Decisions. *American Political Science Review* 57, 9: 632-42.

¹⁰ Goodin, Robert. 1976. *The Politics of Rational Man*. London: Wiley.

¹¹ In the United States, for example, the chairmen of Congressional subcommittees have decision-making authority over the substance of bills to be sent forward to full House or Senate for consideration (Eavey, C. L. and Gary Miller. 1995. Subcommittee Agenda Control. *Journal of Theoretical Politics* 7, 2: 125-156; Hall, R. L. and C. L. Evans. 1990. The Power of Subcommittees. *Journal of Politics* 52, 2: 335-355); Tiefer, C. 1998. Congressional oversight of the Clinton administration and congressional procedure. *Administrative Law Review* 50, 1: 199-216.

¹² A decision by a State Department consular officer to deny a visa application of a student activist is as much a U.S. foreign policy decision as a formal proclamation against student radicalism (Wilson, James Q. 1989. *Bureaucracy: What Government Agencies Do and Why They Do It*. New York: Basic Books). See also Peters. 1989. *The Politics of Bureaucracy*; Freedman, James O. 1981. *Crisis and Legitimacy: The Administrative Process and Government*. New York: Cambridge University Press; and Drezner. 2000. Ideas, bureaucratic politics, and the crafting of foreign policy.

¹³ In the environment of complex interdependence that characterizes modern international relations, international regimes exist when state behavior is modified as a result of joint rather than independent decision making (Stein, Arthur A. 1983. Coordination and Collaboration: Regimes in an Anarchic World. In *International Regimes*, ed. Stephen D. Krasner, pg. 369. Ithaca: Cornell University Press).

¹⁴ The extent to which power is shared depends on the decision-rules in place (Kaufmann. 1988. *Conference Diplomacy: An Introductory Analysis*).

A few individuals are vested some limited procedural authority. The presiding officer, for example, has a certain amount of authority to make procedural decisions, and secretariats have some authority to propose conference agendas. Individuals in these positions, however, must be extremely cautious in using this authority to further their own policy objectives, as the legitimacy of their authority is highly dependent on their reputations for being fair and impartial.¹⁵ This shared power of decision-making makes other sources of power, such as the ability to offer inducements, more important.

4.2.2. The Power of Contingent Inducements

The ability to offer inducements of some kind is a second source of power. Kellman suggests that inducements may be classified along two dimensions: (1) as normative, economic, or coercive, and (2) as reward or punishment. Normative inducements are those involving esteem or prestige, such as an appointment to a prestigious position. The emotional aspects of friendship, loyalty, and trust can also be construed as normative inducements. Economic inducements are inducements that involve material goods (bribes, rewards, etc). Coercive inducements in the political sense might include threats to an actor's political future, removal from office, or, in extreme cases, physical harm.

In general, actors lacking decision-making authority will offer inducements to those who have it in exchange for cooperative behavior.¹⁶ However, the effectiveness of an inducement is directly related to its size or weight.¹⁷ Coalitions that are able to effectively pool the resources of its members are able to offer decision-makers larger inducements than the individuals themselves would be able to do. Ultimately, the weight of an inducement will be determined by the individual being offered it, as an inducement has little weight if it is of little or no value to him or her.

Competing inducements can create a significant dilemma for those holding decision-making authority. In the case of many environmental issues, for example, decision-makers are faced with two competing normative inducements: being cast as a savior of the environment or being cast as a savior of jobs that might be lost if pollution are reduced. To resolve this problem, decision-makers tend to compare policy alternatives against a single value or criterion depending on which "face of the issue" they see at the time that they must make a choice, placing little or no value on that face that is inconsistent with their beliefs.¹⁸

¹⁵Kaufmann. 1988. *Conference Diplomacy: An Introductory Analysis*.

¹⁶For example, trade unions offer legislators votes, and interest groups offer campaign contributions. Dye states that "Washington is a city of "representatives"—agents, advocates, lawyers, lobbyists and "fixers" who offer to influence government policy for a price." Particular important are those former high-level government officials—former Congress members, Cabinet secretaries and White House aides—who "know their way around" and are able to use their personal influence to open doors and influence policy (Dye. 1995. *Who's Running America? The Clinton Years*).

¹⁷As Kellman points out, the threat of 50,000 angry voters is more likely to have an effect on a legislator than one of 50 angry voters (Kelman. 1987. *Making Public Policy*).

¹⁸For example, if an environmental regulation has implications in terms of saving lives and spending money, individuals will choose stricter regulations if they view the problem in terms of lung cancer but will oppose stricter regulations if they view the problem in terms of dollars (Kelman. 1987. *Making Public Policy*). See also Lau, Richard R., Richard A. Smith, and Susan T. Fiske. 1991. Political Beliefs, Policy Interpretations, and Political

Because decision-making authority at the international level is particularly diffuse, inducements are an important source of power.¹⁹ Observer groups can offer negotiators domestic support and rival negotiators can threaten sanctions.²⁰ Negotiators can offer inducements can also be made by linking related issues, or by offering side-payments to recalcitrant parties.²¹ However, the costs associated with offering inducements in international subsystems tends also to increase, as the large number of actors and coalitions participating in most international subsystems increases the probability of that critical players are offered competing inducements.

4.2.3. The Power of Persuasiveness

A third source of power is persuasiveness. Persuasiveness is the ability of political actors to influence others to support their positions through the use of argument and information.²² As such, it is an important source of power for those actors lacking decision-making authority or the ability to offer inducements. Much of the power of individuals within the bureaucracy lies in their access to and control of knowledge and technical information.²³ Even though organizational charts suggest that political executives are in positions to control the bureaucracy, individuals within the bureaucracy are capable of substantially influencing agency policy, if not determining it, through their ability to control information, proposals for policy, and knowledge concerning

Persuasion. *Journal of Politics* 53, 3: 644-675.

¹⁹ While this use of the ACF departs from the traditional models of international relations, much in this traditional IR literature emphasizes the use of inducements to promote cooperative behavior. The classic characterization of international politics holds that states are autonomous sovereign entities that develop their own strategies, chart their own courses, and make their own decisions (Stein. 1983. *Coordination and collaboration: regimes in an anarchic world*). The very notion of “hegemonic stability” is rooted in the concept that powerful states will use the threat of force to induce weaker states to cooperate. Because state behavior is guided purely by their self-interest, inducements are necessary means to achieve international cooperation.

²⁰ Raustiala. 1997. *States, NGOs, and international environmental institutions*.

²¹ Susskind. 1994. *Environmental Diplomacy: Negotiating More Effective Global Agreements*; Mayer. 1992. *Managing domestic differences in international negotiations: the strategic use of internal side-payments*.

²² Neustadt argues that, while the President of the United States has often been called the most powerful person in the world, presidential power is ultimately “the power to persuade.” He writes that “underneath our images of Presidents-in-boots, astride decisions, are the half-observed realities of Presidents-in-sneakers, stirrups in hand, trying to induce particular department heads, or congressmen, or senators to climb aboard.” (Neustadt, Richard E. 1966. *White House and Whitehall. Public Interest* 2, Winter: 2). Along these same lines, Franklin D. Roosevelt once complained that “The Treasury is so large and far-flung and ingrained in its practices that I find it is almost impossible to get the action and results I want...But the Treasury is not to be compared with the State Department...(and) the Treasury and the State Department put together are nothing compared with the Navy... To change anything in the Navy is like punching a feather bed. You punch it with your right hand and you punch it with your left until you are finally exhausted and then you find the damn bed just as it was before you started punching” (Hilsman. 1990. *The Politics of Policy Making in Defense and Foreign Affairs: conceptual models and bureaucratic politics*).

²³ Weber writes that “Apart from being rooted in the administrative division of labor, the power of all bureaucrats rests upon knowledge of two kinds: First, technical know-how in the widest sense of the word acquired through specialized training...However, expertise alone does not explain the power of the bureaucracy. In addition, the bureaucrat has official information, which is available through administrative channels and which provides him with the facts on which he can base his actions. Only he who can get access to these facts independently of the officials’ good will can effectively supervise the administration (Weber, M. 1978. *Economy and Society*. Berkeley: University of California Press).

feasibility.²⁴ They can also undermine policies with which they are unhappy by leaking classified information to powerful individuals outside the agency.²⁵

Persuasion is also an important source of power for members of the news media. While journalists may not be involved in the decision-making itself, they can set the political agenda by persuading others as to what issues are important.²⁶ As Cohen puts it, members of the media, while they “may not be successful in telling us what to think, they are stunningly successful in telling us what to think about.”²⁷ There is also evidence that they play an important role in reinforcing beliefs.²⁸

Because decision-making power at the international level is generally diffuse and actors tend to be faced with many competing inducements, persuasiveness is a critical source of power in international subsystems.²⁹ As Colosi points out:

²⁴Political executives are particularly dependant on their staff, and they tend to lack the skills relevant to understanding the policies that must be made and a lack of time to both gain and understanding and manage the policies (Peters. 1989. *The Politics of Bureaucracy*). For example, of the fifty-one appointments to departmental ministerial posts in the United Kingdom between 1964 and 1970, only five had any substantial prior knowledge of the policy area (Headey, Bruce. 1974. *British Cabinet Ministers*. London: George Allen and Unwin). These difficulties increase with decentralization. See also Botcheva, L. 2001. Expertise and international governance: Eastern Europe and the adoption of European Union environmental legislation. *Global Governance* 7, 2: 197-224; Christiansen. 2002. The role of supranational actors in EU treaty reform; Dimitrov, R. 2003. Knowledge, power, and interests in environmental regime formation. *International Studies Quarterly* 47, 1: 123-150; and Dudley and Richardson. 1999. Competing advocacy coalitions and the process of 'frame reflection': a longitudinal analysis of EU steel policy.

²⁵For example, leaks from Environmental Protection Agency officials to environmental groups and Congress during the early 1980's revealed the extent to which the Reagan Administration's appointee for EPA Administrator, Anne Burford, was using administrative procedures to undermine environmental laws. These revelations eventually forced her to resign (Cook, Brian and Dan Wood. 1989. Principal-Agent Models of Political Control of Bureaucracy. *American Political Science Review* 83, 9: 965-978). See also Bovens, M. A., H. G. Geveke, and J. de Vries. 1995. Open public administration in the Netherlands: The politics of leaking. *International Review of Administrative Sciences* 61, 1: 17.

²⁶Mazur, Allan and Jinling Lee. 1993. Sounding the Global Alarm: Environmental Issues in the US National News. *Social Studies of Science* 23: 681-720 White, in writing about the power of the press in the United States, asserts: “The power of the press...is a primordial one. It sets the agenda of public discussion; and this sweeping political power is unrestrained by any law. It determines what people will talk about and think about—an authority that in other nations is reserved for tyrants, priests, parties, and mandarins.” (White, Theodore. 1972. *The Making of the President, 1972*. New York: Bantam).

²⁷Cohen, Bernard C. 1963. *The Press and Foreign Policy*. Princeton: Princeton University Press, 1963. See also McCoombs, Maxwell E. and Donald L. Shaw. 1984. The Agenda Setting Function of the Press. In *Media Power in Politics*, ed. Doris Graber. Washington: Congressional Quarterly Inc; McComas and Shanahan. 1999. Telling stories about global climate change - Measuring the impact of narratives on issue cycles; Ungar, S. 1998. Hot crises and media reassurance: a comparison of emerging diseases and Ebola Zaire. *British Journal of Sociology* 49, 1: 36-56; and Mazur and Lee. 1993. Sounding the Global Alarm: Environmental Issues in the US National News.

²⁸Ader, Christine R. 1995. A Longitudinal Study of Agenda Setting for the Issue of Environmental Pollution. *Journalism & Mass Communication Quarterly* 72, 2: 300-311; Sears, David O. and Richard E. Whitney. 1973. Political Persuasion. In *Handbook of Communication*, ed. Ithiel de Sola Pool. Chicago: Rand McNally.

²⁹This is one reason that foreign service officers at the U.S. State Department have historically placed a high value on “the diplomatic approach,” meaning “subtlety, skill in negotiation, cultural sophistication, and good manners” (Warwick, Donald P. 1975. *A Theory of Public Bureaucracy: Politics, Personality, and Organization in the State Department*. Cambridge, Mass.: Harvard University Press). See also Litfin, K. T. 1995. Framing Science -

“The basic job of all negotiators, if the parties do not agree with their positions, is to create doubts and uncertainties in the minds of the other parties’ positions. The activity of “doubt creation” is central to the art of persuasion...Negotiators create both “facts” and “non-facts” by mutual agreement. In negotiation, an unchallenged assumption usually becomes a “fact” (for that particular negotiation)...Parties will then concentrate on how to explain the “facts” and “non-facts” in a way acceptable to interested others.”³⁰

NGOs in the international subsystems are particularly dependent on the power of persuasion, and have become adept at using it.³¹ In addition to the informal “corridor lobbying” of government delegates, procedural rules for most international environmental agreements now allow NGOs to speak from the floor with simultaneous translation, circulate draft texts of their own design, and distribute their own materials and commentaries.³² The organizations also play important roles in persuading governments whether or not to ratify treaties and monitoring the status of states’ compliance with these treaties.³³

Closely related to the notion of persuasion as a source of political power is the role that policy analysis and the exchange of technical information plays in shaping the emergence of an issue and perceptions of its seriousness, causes, and the likely consequences of various policy alternatives. These analyses and information exchanges are important aspects of policy-oriented learning, which is the process through which beliefs change over time.³⁴

Precautionary Discourse and the Ozone Treaties. *Millennium: Journal of International Studies* 24, 2: 251-277; and Price, R. 1998. Reversing the gun sights: Transnational civil society targets land mines. *International Organization* 52, 3: 613+.

³⁰ Colosi, Thomas R. 1986. The Iceberg Principle: Secrecy in Negotiation. In *Perspectives on Negotiation*, ed. Diane B. Bendahmane and John W. McDonald, pg. 243-306. Washington, D.C.: Foreign Service Institute.

³¹ One difficulty with this increased participation is that agreements on difficult issues are often only reached when negotiations take place behind closed doors (Colosi. 1986. The Iceberg Principle: Secrecy in Negotiation). In reaction to this increased formal NGO participation, governments have taken to conducting much of their substantive negotiations in “informal consultations,” “extended bureau meetings,” and “informal informals”--meetings too informal for NGOs to participate but where most of the decisions are made (Raustiala. 1997. The “participatory revolution” in international environmental law).

³² NGO draft documents are often widely relied by states and have influenced the evolution and creation of several environmental treaties (Raustiala. 1997. The “participatory revolution” in international environmental law). For example, an independent legal opinion circulated the World Wide Fund for Nature (WWF). at the Seventh CITES meeting was instrumental in discrediting a number of the arguments being offered against the proposed total ban on the ivory trade (Princen, Thomas. 1995. Ivory, Conservation, and Environmental Transnational Coalitions. In *Transnational Relations Back In: Non-State Actors, Domestic Structures and International Institutions*, ed. Thomas Risse-Kappen, pg. 227. New York: Cambridge University Press). Similarly, the RAINS model of acid deposition developed by the International Institute of Applied Systems Analysis played a central role in the development of the LRTAP regime (Raustiala. 1997. States, NGOs, and international environmental institutions).

³³ Haas has suggests that governments committed to the Mediterranean Action Plan only after foreign ministry officials were persuaded of the need to do so by marine scientists and members of the ecological community (Haas. 1989. Do regimes matter? Epistemic communities and Mediterranean pollution control). Governments rejected, however, the Convention on the Regulation of Arctic Mineral Resource Activities (CRAMA). after it was opposed by Greenpeace, the Environmental Defense Fund (EDF). and other NGOs (Raustiala. 1997. States, NGOs, and international environmental institutions). See also Chayes and Chayes. 1995. *The New Sovereignty: Compliance with International Regulatory Agreements*; and Victor, Raustiala, and Skolnikoff. 1998. *The Implementation and Effectiveness of International Environmental Commitments: Theory and Practice*.

³⁴ Policy-oriented learning is defined as the relatively enduring changes in perceptions or behavioral intentions, and encompasses all forms of learning through experience (Sabatier and Jenkins-Smith. 1997. The Advocacy Coalition

Policy-oriented learning is not part of a disinterested search for the “truth,” but takes place in the context of a political process in which people are competing over the authoritative allocation of values and over the ability to use the instruments of government in their behalf. Coalitions that are not dominant have substantial incentives to document performance gaps in existing policies and programs and improve their understanding of the causal reasons for such gaps. The dominant coalition has incentives to provide evidence that no such gaps exist. The result is an analytical debate in which each side attempts to persuade the others--as well as neutral parties, particularly potential policy brokers--of the validity of its claims.³⁵

The learning process is also shaped by a variety of cognitive constraints. Time and computation constraints limit the ability of an actor to process and analyze information, and preexisting normative and other beliefs act as filters on their perceptions of this information. In addition, the environment in which it takes place is one in which:

“...performance gaps are difficult to measure, well-developed causal theories are often lacking, controlled experimentation is virtually impossible, opponents are doing everything possible to muddle the situation, and even allies’ motives are often suspect because of personal and organizational rivalries.”³⁶

As a result, actors in different coalitions perceive the world through different “lenses and can have very different interpretations of a given piece of evidence.

Given this environment, Jenkins-Smith and Sabatier suggest that four principles generally govern the use of analysis in the policy process:

Framework: An Assessment). Particularly important are those perceptions regarding (1). the state of variables defined as important by one’s belief system, (2). the status of causal relationships in one’s belief system, (3). feedbacks concerning existing policies, and (4). political opportunities and constraints that result from experience or the accumulation of information. The ACF places particular emphasis on the role of policy-oriented learning, and represents one of the more detailed attempts to delineate the role that ideas play in public policy. Other approaches to this concept include Hecllo, Hugh. 1974. *Social Policy in Britain and Sweden*. New Haven: Yale University Press; Kingdon. 1984. *Agendas, Alternatives, and Public Policies*; Reich, Robert B., ed. 1988. *The Power of Public Ideas*. Cambridge, MA: Harvard University Press; Hall, Peter A. 1993. Policy Paradigms, Social Learning, and the State: The Case of Economic Policymaking in Britain. *Comparative Politics* 25, 4: 275-296; and Goldstein, Judith and Robert O. Keohane, eds. 1993. *Ideas and Foreign Policy*. Ithaca, NY: Cornell University Press.

³⁵ Jenkins-Smith cites the example of the air pollution, where the accumulation of scientific information over the past thirty years has greatly improved the knowledge of pollutants in different cities and the perceptions of their effects on human health. He points out that scientific understanding of acid rain was substantially improved through two decades of debate between members of the two coalitions concerning the seriousness of the problem, the relative contributions of natural processes versus emissions from mid-western utilities as causal factors, and the appropriate policy instruments to be used in addressing the problem (Jenkins-Smith, Hank and Paul A. Sabatier. 1993. *The Dynamics of Policy-Oriented Learning*. In *Policy Change and Learning: An Advocacy Coalition Approach*, ed. Paul A. Sabatier and Hank Jenkins-Smith. Boulder, San Francisco and Oxford: Westview Press). See also Bressers, H. T. A. and Walter A. Rosenbaum. 2000. Innovation, learning, and environmental policy: Overcoming "a plague of uncertainties". *Policy Studies Journal* 28, 3: 523-539; Haas. 2000. International institutions and social learning in the management of global environmental risks; and Clark, Eindoven, and Jaeger. 1999. *Learning to Manage Global Environmental Risks: A Comparative History of social Responses to Climate Change, Ozone Depletion and Acid Rain*.

³⁶ Jenkins-Smith and Sabatier. 1993. *The Dynamics of Policy-Oriented Learning* pg 44.

- Analysis is stimulated usually by either threats to core values or perceived opportunities to realize core values;
- The crucial role of technical information is to alert people to the extent to which a given situation affects their interests and values;
- Once political actors have developed a position on a policy issue, analysis is used primarily in an “advocacy” fashion, that is, to justify and elaborate on that position; and,
- Actors generally find it necessary to engage in an analytical debate—that is, to present technical substantiation for their positions—if they are to succeed in translating their beliefs into policy.³⁷

4.2.4. The Power of Deference

Deference as a source of power is the ability of an actor to affect change simply through his or her reputation or name recognition. It is related to both the use of inducements and persuasiveness in that an actor gains deference from other actors after he or she has repeated success at gaining influence through the use of inducements or persuasiveness. The greater deference an individual receives, the less he or she need to then rely on inducements or persuasion. At the international level, the seniority of the individual heading a delegation is usually taken to be an indication of the importance that the country attaches to the negotiations, and very senior diplomats, heads of international organizations, or other internationally renowned individuals are often asked to chair major international conferences because the respect they command assists them in resolving differences among parties.³⁸ In addition, Haas and others have argued that much of the influence that epistemic communities have been able to exert on policy-makers is related to the stature of individuals within these communities.³⁹

³⁷ As an illustration of this last point, a survey of Washington interest groups showed that “a reputation for being credible and trustworthy” was their most important resource, while “a large budget” was perceived as the least important (Kelman. 1987. *Making Public Policy*, pg 35). See also Jenkins-Smith, Hank and David Weimer. 1985. Analysis as Retrograde Action. *Public Administration Review* 45, 7: 485-494; Sabatier, Paul A. 1978. The Acquisition and Utilization of Technical Information by Administrative Agencies. *Administrative Science Quarterly* 23, 9: 386-411; Wildavsky, Aaron. 1979. *Speaking Truth to Power: The Art and Craft of Policy Analysis*. Boston: Little, Brown and Company; and Mazur, Allan. 1981. *The Dynamics of Technical Controversy*. Washington, D.C.: Communications Press.

³⁸ Berridge and Jennings. 1985. *Diplomacy at the UN*; Kaufmann. 1988. *Conference Diplomacy: An Introductory Analysis*.

³⁹ Haas. 1989. Do regimes matter? Epistemic communities and Mediterranean pollution control. See also Kaelberer, M. 2003. Knowledge, power and monetary bargaining: central bankers and the creation of monetary union in Europe. *Journal of European Public Policy* 10, 3: 365-379; Zito, A. R. 2001. Epistemic communities, collective entrepreneurship and European integration. *Journal of European Public Policy* 8, 4: 585-603; Gough, C and Simon Shackley. 2001. The respectable politics of climate change: the epistemic communities and NGOs. *International Affairs* 77, 2: 329; Moravcsik, Andrew. 1999. A new statecraft? Supranational entrepreneurs and international cooperation. *International Organization* 53, 2: 267; and Verdun, A. 1999. The role of the Delors Committee in the creation of EMU: an epistemic community? *Journal of European Public Policy* 6, 2: 308-328.

4.2.5. The Power of Strategic Skill

A fifth source of power is strategic skill. A political strategy is a plan to maximize one's chances of success, given a set of institutional arrangements and resources.⁴⁰ A skillful actor is one who makes efficient use of political resources by accurately assessing the relative costs and benefits of each instrument and using these instruments in such a way that the costs are minimized and benefits maximized. A skillful actor also knows when and how to seek solutions in other subsystems.⁴¹

Strategic skill as a source of power also includes knowing how and when to use other sources of power. For example, an actor might have resources at his or her disposal to provide a substantial inducement, but knowing how to offer the inducement to what person requires strategic skill. If a set of actors share decision-making authority, those with greater strategic skills may be able to substantially shape the decisions of those with less skill. Thus strategic skill can amplify other sources of power.⁴²

This notion of strategic skill as a source of power is consistent with Mintrom and Vergari's argument that the policy entrepreneurship (PE) model fits well with the ACF's explanation of policy change.⁴³ Policy entrepreneurs are individuals who are able to advance their political goals by introducing new ideas and approaches into the policy process.⁴⁴ They tend to define

⁴⁰ Kelman. 1987. *Making Public Policy*.

⁴¹ Kelman suggests that much of President Reagan's success during the early months of his presidency in 1981 was due to strategic skill of his administration. It took advantage of the economic disarray and a substantial electoral margin to put in place a specific plan of action, concentrated energies on only a few issues (budget and tax changes), rather than dissipating them over a large agenda, and presented a face on these issues that was most favorable to their views—the idea that the country would collapse economically if the changes were not adopted. In a similar vein, William Safire describes how, in a meeting President Nixon convened with his economic advisors to discuss the wage-price decision, very little time was spent discussing which policy to follow, but a tremendous amount of time was devoted to tailoring the policy so as to enlist the support or head off the opposition of Congress, the press and TV, various special interests and constituencies, and other nations who use the dollar as their reserve currency (Safire, William. 1975. *Before the Fall: An Inside View of the Pre-Watergate White House*. Garden City, N.Y.: Doubleday).

⁴² For a good discussion of leadership and strategic skill at the international level, see Young, Oran R. 1991. Political leadership and regime formation: on the development of institutions in international society. *International Organization* 45, 3: 281-308.

⁴³ Mintrom, M. and S. Vergari. 1996. Advocacy coalitions, policy entrepreneurs, and policy change. *Policy Studies Journal* 24, 3: 420-434.

⁴⁴ According to Mintrom and Vergari, policy entrepreneurs do "...for the policymaking process what business entrepreneurs do for the marketplace. That is to say, policy entrepreneurs serve to bring new policy ideas into good currency" Mintrom and Vergari. 1996. Advocacy coalitions, policy entrepreneurs, and policy change, pg 422. They do so by carrying out three functions: (1). they discover unfulfilled needs and suggest innovative means to satisfy them; (2). they take on the risks associated with pursuing actions that have uncertain consequences; and, (3). they serve to resolve the problems of collective action by assembling and coordinating networks of individuals and organizations. For a further discussion of policy entrepreneurs, see, e.g., Baumgartner, Frank and Bryan Jones. 1993. *Agendas and Instability in American Politics*. Chicago: University of Chicago Press; Kingdon. 1984. *Agendas, Alternatives, and Public Policies*; Cobb, R. W. and C. W. Elder. 1983. *Agendas and Instability in American Politics*. Chicago: University of Chicago Press; Arrow, K. J., J. K. Parikh, and G. Pillet. 1996. Decision-Making Frameworks for Addressing Climate Change. In *Climate Change 1995 - Economic and Social Dimensions of Climate Change: Contribution of Working Group III to the Second Assessment Report of the Intergovernmental Panel on Climate Change*, ed. J. Bruce and Hoesung Lee. New York: Cambridge University Press; Polsby, N.

policy problems in ways that both attract the attention of decision-makers and indicate appropriate policy responses, and are skilled in crafting their ideas in different ways for different audiences.⁴⁵ They also tend to spend large amount of time networking in and around government, which gives them insights into how other people think about policy problems and how they might best shape their arguments. This networking also enables them to build coalitions that support their ideas and enhances their reputation for being trustworthy and credible.⁴⁶

4.3 CONSTRAINTS ON POWER: SYSTEM-WIDE PARAMETERS AND OVERLAPPING SUBSYSTEMS

These various sources of power are both enhanced and constrained by a variety of social, legal, and resource features of broader political system in which the subsystem resides.⁴⁷ The extent to which the political system fosters some degree of overlap among subsystems within it is particularly important, as this overlap provides a mechanism through which coalitions without power in one subsystem can seek alternative solutions in another, more sympathetic subsystem. In systems where these overlapping subsystems proliferate, cooperation among these overlapping subsystems is necessary if the policies they develop are to be implemented as they intend.

4.3.1. System-Wide Parameters

While subsystem actors derive some of their power from qualities inherent within themselves, others are derived from, and are constrained by, the social, economic, and legal features of the larger political system. Most important among these system-wide parameters are the basic attributes of the problem area, the basic distribution of natural resources, fundamental cultural values and social structure, and basic legal structure. These parameters, which are generally stable over the course of several decades, determine relationships both among subsystems and between subsystems and the broader political system. Because they are difficult to change, subsystem actors do not generally regard them as objects of strategizing behavior. However, they are extremely important in both constraining and enhancing subsystem actors' political resources, and are thus critical factors in determining the dominant coalition.

1984. *Political Innovation in America*. New Haven, CT: Yale University Press; and Smith, J. A. 1991. *The Idea Brokers: Think Tanks and the Rise of the New Policy Elite*. New York: The Free Press.

⁴⁵ see, e.g., Dupont, Christophe. 1996. Negotiation as Coalition Building. *International Negotiation* 1: 47-64.

⁴⁶ See e.g., Garrison. 2001. Framing foreign policy alternatives in the inner circle: President Carter, his advisors, and the struggle for the arms control agenda; Moravcsik. 1999. A new statecraft? Supranational entrepreneurs and international cooperation; Young, Oran R. 1999. Comment on Andrew Moravcsik, "A new statecraft? Supranational entrepreneurs and international cooperation". *International Organization* 53, 4: 805-809.

⁴⁷ See, e.g., Bowles, Samuel and Herbert Gintis. 1986. *Democracy and Capitalism: Property, Community, and the Contradictions of Modern Social Thought*. New York: Basic Books; Hofferbert, Richard. 1974. *The Study of Public Policy*. Indianapolis: Bobbs-Merrill; Kiser, Larry and Elinor Ostrom. 1982. The Three Worlds of Action. In *Strategies of Political Inquiry*, ed. Elinor Ostrom, pg. 119-148. Beverly Hills: Sage; Buzan, Barry. 1993. From international system to international society: structural realism and regime theory meet the English school. *International Organization* 47, 3: 327-352.

The Characteristics of the Problem Area

The characteristics of the problem area can constrain a coalition's sources of power in a variety of ways. For example, difficulties in assigning property rights to certain resources can constrain persuasion as a source of power by limiting both the institutional options that are considered feasible and the policy-oriented learning that is associated with it.⁴⁸ While ozone depletion and climate change have been recognized as problems that are best addressed through global intergovernmental agreements, the time differences between national capitals and negotiation sites and the prolonged duration of the negotiating sessions place significant constraints on decision-making processes through which these global treaties are negotiated.⁴⁹ Interactions among the attributes of the problem area and such system-wide sociological phenomena as the "issue-attention cycle" can also affect various sources of power, limiting, for example, the value of inducements and the effectiveness of persuasion.⁵⁰

The Distribution of Natural Resources

The distribution of natural resources affects a society's overall wealth and the viability of different economic sectors and many aspects of its culture.⁵¹ These factors in turn can determine which individuals hold positions of authority and shape the nature of inducements.⁵² The distribution of resources also restricts the range of viable policy options and the ability of

⁴⁸Experiences in a number of different countries have shown that problems affecting common pool resources such as ocean fisheries and large underground aquifers are more effectively addressed by government regulation than by the markets (Ostrom. 1990. *Governing the Commons: The Evolution of Institutions of Collective Action*). While advocates of free markets may continue to advocate market solutions to common pool resource problems, their ability to persuade others that these sorts of problems can be effectively addressed without some of government regulation may be limited. Along the same lines, a problem's susceptibility to quantitative measurement and the existence of robust causal models strengthens the hand of those trying to persuade others as to the nature of the problem and the deficiencies of existing policies. For instance, improvements in models of chlorine chemistry in the atmosphere and clear, quantitative evidence of ozone depletion prompted DuPont, the world's leading producer of CFCs, to announce in 1988 that it would cease production of the chemicals and support a global phase-out of them (Benedick, Richard Elliot. 1998. *Ozone Diplomacy: New Directions in Safeguarding the Planet*. Cambridge: Harvard University Press).

⁴⁹ The time differences between national capitals and negotiation sites impairs not only the physical condition of the negotiators (through, for example, jet lag), but also the quality and intensity of communications between negotiators and the central government authorities. The prolonged duration of many global treaty negotiations, which can involve 16- to 20-hour days for several weeks on end, can have substantial physical and psychological impacts, resulting in inflexibility or, in some cases, a loss of temper. Finally, the large number of players and the tendency of like-minded delegations to work together as regional or other groups requires that tremendous amounts of time is spent coordinating positions rather than negotiating. (Lang. 1996. *Negotiation as Diplomatic Rule-Making*).

⁵⁰ Downs, Anthony. 1972. Up and Down with Ecology--the "Issue-Attention Cycle". *Public Interest*, 28: 38-49.

⁵¹ It should be noted that the inclusion of distribution of natural resources as a system-wide parameter presumes that these resources are converted to wealth. Many developing countries, such as the Congo or Nigeria, have vast natural resources but lack the technologies or social institutions to exploit them effectively. The existence of substantial natural resources is also not necessarily a prerequisite for wealth.

⁵²For example, corporate and political elites in the United States tend to be recruited from the well-educated, prestigiously employed, older, affluent, upper- and upper-middle-class populations of the nation (Alba, Richard D. and Gwen Moore. 1982. *Ethnicity in the American Elite*. *American Sociological Review* 47, 6). Dye estimates that 30 percent of the institutional elites have upper-class backgrounds, as compared to less than 1 percent for the general population (Dye. 1995. *Who's Running America? The Clinton Years*).

individuals to collect information, in turn affects powers of persuasion.⁵³ Finally, wealth provides coalition actors without access to those in positions of authority, or without powers of persuasion, deference, or strategic skill, to hire the services of individuals with these powers.⁵⁴

The distribution of natural resources, and the economic influence that results from this distribution, also constrains power at the international level. Structural factors as the global distribution of economic power shape both the bargaining context and the perceptions of various actors in this bargaining.⁵⁵ Because many transboundary environmental problems are associated with economic activity, participants engaged in environmental treaty negotiations must take into account the fact that solutions are unlikely to be achieved against the will of players with significant economic power that are participating in the negotiations. Concessions must be made and special advantages granted to lure them into a treaty. At the same time, countries at different levels of economic development may refuse to join the treaty unless the least developed among them obtain special treatment in terms of lesser or later obligations. This can lead to dilemma the confronting many negotiators: to have a weak treaty or no treaty at all.

Because of the substantial costs associated with participating in the international policy process, the distribution of wealth among countries also affects the abilities of various coalition members to participate in the process and bring to bear other sources of power that they might have at their disposal. Industrialized country governments, for example, can afford to send to international negotiating sessions delegations that are larger than those of most developing countries, in turn allows them to participate more actively in the sessions and consult more frequently with their allies.⁵⁶ In many recent international environmental negotiations, delegations from the poorer developing countries have often worked closely with international environmental advocacy groups in transnational coalitions in order to overcome some of the disadvantages they face in negotiating with delegations from industrialized countries.⁵⁷ NGOs

⁵³ For example, because the United States has relatively abundant coal reserves, the government could encourage utilities to shift from oil to coal in the 1970s while France, lacking coal, turned to nuclear power. As will be discussed in Section 3, the dependence of West Virginia and other states on these same coal reserves has ignited fierce opposition in the U.S. Congress to the consideration of a carbon tax to address climate change.

⁵⁴ Nelson, P. J. 1997. Conflict, legitimacy, and effectiveness: Who speaks for whom in transnational NGO networks lobbying the World Bank? *Nonprofit and Voluntary Sector Quarterly* 26, 4: 421-441; Austen-Smith, D. 1993. Information and Influence - Lobbying For Agendas and Votes. *American Journal of Political Science* 37, 3: 799-833; Warleigh. 2000. The hustle: citizenship practice, NGOs and 'policy coalitions' in the European Union - the cases of Auto Oil, drinking water and unit pricing.

⁵⁵ Stein. 1983. Coordination and collaboration: regimes in an anarchic world.

⁵⁶ An important part of multilateral negotiations is knowing the positions of, and persuading, other countries' negotiators before they arrive at the negotiating table. While embassies have an important role to play in this process, so does direct contact by telephone, fax and face-to-face meetings, all of which require resources. Again, the more developed countries have an advantage here (Crowe. 1993. *Foreign Policy-Making: Reflections of a Practitioner*).

⁵⁷ See, e.g., Raustiala. 1997. States, NGOs, and international environmental institutions; Reimann, Kim D and Forrest, Richard. 2002. Connecting Global and Local Societal Activism: International Politics, NGOs and the Environmental Movement of Japan.; Wapner. 1995. *Politics Beyond the State - Environmental Activism and World Civic Politics*.

with larger staffs, larger budgets, and larger memberships are also likely to be more active on issues such as climate change.⁵⁸

Fundamental Cultural Values and Social Structure

Fundamental cultural values and social structure also constrain actors' sources of power. At the national level, culture can be defined as the set of attitudes and beliefs that makes a person distinctively American, British, French, Japanese, or Chinese.⁵⁹ As part of this culture, most members of a society share a "political culture," a set of complex cognitive and evaluative structures that create a common view of what constitutes good government and proper administration.⁶⁰ While general values in a society influence the behavior of individuals, the political culture structures in part the relationships between political and bureaucratic elites, and between the population and the government. A culture may virtually mandate certain actions and prohibit others by defining what in government is good and bad.⁶¹

These cultural values and social structures are critical in constraining all sources of power. In many countries, the vast majority of the wealth is controlled by a very small percentage of the population. In addition to possessing the resources necessary to offer elites, these elites often control positions of authority within the state, which provides them with significant decision-making authority as well.⁶² The decisions themselves also have a cultural dynamic. For example, in much of the non-Western world, and even in portions of the Western world, all decisions are assumed to be subject to influence through personal bargaining and negotiation.⁶³

⁵⁸ Dalton, Russell J., Steve Recchia, and Robert Rohrschneider. 2003. The Environmental Movement and the Modes of Political Action. *Comparative Political Studies* 36, 7: 743-771.

⁵⁹ Alexis de Tocqueville noted that Americans have a commitment in the ideals, laws, and customs to what he called "equality of condition". Various other observers have noted that Americans are individualistic, competitive, and tend toward a moral dualism (i.e., preferring policies that are both morally "good" and "good for business." See also Exoo, Calvin F. 1987. *Democracy Upside Down: Public Opinion and Cultural Hegemony in the United States*. New York: Praeger; Neuman, W. Russell. 1986. *The Paradox of Mass Politics: Knowledge and Opinion in the American Electorate*. Cambridge: Harvard University Press; and McClosky, Herbert and John Zaller. 1984. *The American Ethos: Public Attitudes Toward Capitalism and Democracy*. Cambridge: Harvard University Press.

⁶⁰ Peters. 1989. *The Politics of Bureaucracy*.

⁶¹ While some aspects of this political culture are directed towards the content of policy, others direct the style of governance. That is, not only must governments do certain things in order to be considered a proper government, but those developing and administering policies must perform their duties in certain ways. See also, e.g., Pye, Lucian W. and Sidney Verba. 1965. *Political Culture and Political Development*. Princeton: Princeton University Press; Douglas, Mary T. and Aaron Wildavsky. 1982. *Risk and Culture*. Berkeley: University of California Press.

⁶² Bealey, F. 1996. Democratic elitism and the autonomy of elites. *International Political Science Review* 17, 3: 319-331; Putnam, Robert D. 1976. *The Comparative Study of Political Elites*. Englewood Cliffs: Prentice Hall.

⁶³ Formal rules promulgated by the bureaucracy constitute merely a place to begin the bargaining. In other societies, in particular some of the newly industrialized countries, a "prismatic" style decision-making exists in which a law establishes one policy although in practice a different policy prevails. A rule is formally announced but is not effectively enforced. The formalistic appearance of the rule contrasts with its actual administration—officials are free to make choices, enforcing or disregarding the rule at will. This form of administrative "double-talk" is prevalent in societies with well-developed bureaucratic apparatuses but without the cultural infrastructure to support it. (Peters. 1989. *The Politics of Bureaucracy*.)

Societal norms are also important in constraining subsystem actors' power of persuasion by limiting the kinds of policy options that could be considered.⁶⁴

Similar concepts also apply at the international level, with international regimes often being defined as a set of internationally accepted values and norms that constrain behavior.⁶⁵ International regimes are usually embodied within, and derived from, an international legal framework such as a treaty. However, internationally accepted norms that influence individual actors can also develop in the absence of such a framework.⁶⁶ For example, the development of the international treaty banning land mines has been attributed to the global diffusion of a set of norms by transnational coalitions of NGOs functioning as a "global civil society."⁶⁷

The Basic Legal Structure

A system's basic legal structure is a third parameter constraining power within a subsystem. The basic legal structure is the set of rules that authorize individuals operating within the system to act in certain ways, and establish the context within which advocacy coalitions engage in collective action to realize common goals.⁶⁸ The most important impact of the basic legal structure is to define the parameters of formal decision-making authority.⁶⁹ The rules and

⁶⁴ For instance, large-scale nationalization of certain industries may be a viable policy option in certain countries in Europe but cannot be considered in the United States largely because of differences in social norms (Kratochwil. 1989. *Rules, Norms and Decisions*). See also Checkel, J. T. 1999. Norms, institutions, and national identity in contemporary Europe. *International Studies Quarterly* 43, 1: 83-114. It should be noted here that culture is subject to change, and there is a constant interaction of culture and politics that redefines the role of government. Peters suggests that the latitude of action allowed to most democratic governments at present would have been unthinkable in at the beginning of the 19th century, before two world wars, a major economic depression, and a cold war fundamentally altered popular perceptions of the role of government. However, change such as this occurs only gradually over periods of decades, and thus is not generally an object of political strategy (Peters. 1989. *The Politics of Bureaucracy*). See also Inglehart, Ronald. 1977. *The Silent Revolution*. Princeton: Princeton University Press.

⁶⁵ Krasner. 1983. *International Regimes*.

⁶⁶ See, e.g., Cortell, A. P. and J. W. Davis. 1996. How do international institutions matter? The domestic impact of international rules and norms. *International Studies Quarterly* 40, 4: 451-478.

⁶⁷ Price. 1998. Reversing the gun sights: Transnational civil society targets land mines. See also Elgstrom, Ole. 1990. Norms, Culture, and Cognitive Patterns in Foreign-Aid Negotiations. *Negotiation Journal-On the Process of Dispute Settlement* 6, 2: 147-159; Nadelmann. 1990. Global prohibition regimes: the evolution of norms in international society; Maher, I. 2002. Competition law in the international domain: Networks as a new form of governance. *Journal of Law and Society* 29, 1: 111-136.

⁶⁸ Ostrom. 1990. *Governing the Commons: The Evolution of Institutions of Collective Action*. While including "legal" rules, the basic legal structure extends beyond this to include tacit rules, explicit rules, and precepts (Kratochwil. 1989. *Rules, Norms and Decisions*). These basic legal norms are quite resistant to change in most political systems. The U.S. Constitution, for example, has not been significantly altered since the granting of women's suffrage in 1920, and the legal institutions of Great Britain have remained virtually unchanged for almost a century (Sabatier. 1993. *The Advocacy Coalition Framework*).

⁶⁹ In the United States, for example, the decision-making authorities of the President, Congress, and the Courts are constrained by the Constitution, which defines the roles of each branch and provides for a sharing of authority among them. While Congress has the sole authority to pass laws, the President has the sole authority to conduct foreign policy, although only the Senate can ratify a treaty negotiated by the President. It should be noted here that this legal structure also gives rise to implied decision-making authority, or authority to make those decisions necessary to carry out one's assigned responsibilities. For instance, the President's right to appoint cabinet officials with the advice and consent of the Senate implies that he has the right to direct the work of those cabinet

regulations established by this structure generally provide one group with an advantage over another by allowing those decision-making authority to maintain it over time and preventing those without this authority from acquiring it.⁷⁰ However, these rules can also create situations in which decision-making authority is shared either among agencies, among sub-units of an agency, or both, substantially reduces its value as a source of power.⁷¹ However, the basic legal structure also constrains other sources of power. For example, most countries have laws strictly regulating the form and amount of payments that government officials can receive from private individuals or groups, thus limiting the form and value of inducements.⁷² Laws limiting access to both information and decision-makers constrain the use of persuasion.⁷³ Finally, national legal

officials. While Congress can pass legislation requiring that certain agencies carry out certain activities, it has not contested the President's authority to give orders to a cabinet member since the early 19th century (Peters. 1989. *The Politics of Bureaucracy*).

⁷⁰ The rules of the U.S. Congress have required that Committee and sub-committee chairmen be appointed by the majority party strictly according to seniority. Thus the chairs have usually been members from safe, one-party, often rural districts, as these districts most frequently re-elect their representatives (Hinckley, Barbara. 1988. *Stability and Change in Congress*. New York: Harper and Row; McCubbins, Matthew D. and Terry Sullivan. 1987. *Congress: Structure and Policy*. Cambridge: Harvard University Press). Similarly, bureaucratic jurisdiction and authority are carefully defined by strict rules that specify what the bureaus, offices, and individuals can deal with, how they must deal with it, and how they can ensure compliance with their decisions, and most government organizations have in place rules that require bureaucrats to be recruited on the basis of competence, special training, expertise, and experience (Hilsman. 1990. *The Politics of Policy Making in Defense and Foreign Affairs: conceptual models and bureaucratic politics*). Finally, the division of labor among agencies is often based on clientele. For example, the Department of Commerce in general serves business and the Department of Labor in general serves workers. The division of labor might also be based on "subject matters deemed to be related." The National Oceanographic and Atmospheric Administration was placed within the Department of Commerce because the primary clientele for issues related to the oceans and atmosphere (i.e., weather). was business. The division of labor might also be the nature of the work process, with the Government Printing Office being responsible for printing all government documents, or geographical, such as the regional offices of the Environmental Protection Agency. Large organizations will employ, at different levels, units based on all of these criteria: clientele, subject, process and territory.

⁷¹ For example, one of the most persistent criticisms of the U.S. State Department is that it shows little leadership and is slow to act, requiring endless clearances from various bureaus and offices before making a move. However, the very nature of foreign affairs creates this situation, as it must deal with almost two hundred nations and a variety of international organizations, each of which has its own rivalries and interests that clash with those of others. As a result, the bureaucrats who deal with particular nations and problems must each compete for priority, as policies that help one nation or problem may hurt others. Thus it is very difficult for the State Department bureaucracy to present a strong and unified front to the rest of the government (Hilsman. 1990. *The Politics of Policy Making in Defense and Foreign Affairs: conceptual models and bureaucratic politics*).

⁷² Bribery, that is, explicit offers of payment in exchange for a favorable policy decision, is prohibited in most countries. In the United States, a private person may donate no more than \$1000 to the campaign of any individual Congressional or Presidential candidate, and civil servants are prohibited from receiving gifts of any value, including meals. In some other countries, however, the offering of bribes is more socially acceptable, and even in the United States Congress has found it difficult to put substantial limits on less overt forms of payment as "lecture fees."

⁷³ For instance, the concentration of policy-making authority in the British cabinet and higher civil service—coupled with the secrecy that permeates that system—inhibit outsiders from making intelligent evaluations of present policy (Ashford, Douglas. 1981. *Policy and Politics in Britain*. Philadelphia: Temple University Press). Similarly, public choice theorists have shown that decentralized political systems facilitate learning by providing opportunities for policy experimentation and a range of experiences with different policy instruments from which realistic comparisons can be made (Ostrom, Vincent, Charles Tiebout, and Robert Warren. 1961. The organization of Government in Metropolitan Areas. *American Political Science Review* 55, December: 831-842).

structures substantially influence political strategies by constraining the political choices of some actors while expanding those of others.⁷⁴

A system-wide legal structure also exists at the international level that constrains the various sources of power of actors engaging in international negotiations. The concept of sovereignty, in which states are independent and have the right to be free from interference in their domestic affairs, has been the fundamental legal principle constraining behavior at the international level, and has been the basis for all intergovernmental activities.⁷⁵ The most important ramification of this is that decision-making authority is shared among all nations involved in discussions about an issue instead of being vested in a central organization or institution.

Further constraints are created by the Vienna Convention on the Law of Treaties, which establishes the procedural and institutional rules governing all international agreements.⁷⁶ This structure is augmented by the network of existing treaties and agreements that constrain the behavior of parties in certain ways. For example, environmental treaties which compel compliance through the use of trade sanctions, such as the Montreal Protocol on Substances that Deplete the Ozone Layer, need to take into account international trade law as established by such agreements as the General Agreement on Tariffs and Trade (GATT).⁷⁷

4.3.2. System-wide Parameters and the Institutionalization of Power

An important aspect of these sources of power is the degree to which they are institutionalized. Institutionalized sources of power are those that are derived from system-wide parameters rather than qualities innate to the individual actors themselves. All five sources of power—decision-making authority, the ability to offer inducements, persuasion, deference, and strategic skill—have aspects derived from both system-wide parameters and qualities innate to the individuals. However, decision-making authority and the ability to offer inducements is primarily a function of system-wide, or institutional, parameters, while persuasion, deference and strategic skill are largely qualities innate to individual.

As elite power theorists have pointed out, power associated with the authority to make decisions is largely derived from system-wide rules and norms. While an individual's particular qualities may be helpful in gaining a position of decision-making authority, it is the position rather than the person that gives him or her control over the activities of others. For example, in the United States, congressional rules have historically specified that committee chairs are to be awarded strictly on the basis of seniority, so that influences from outside are minimized.⁷⁸ The

⁷⁴ Moe, Terry. 1990. The Politics of Structural Choice: Toward a Theory of Public Bureaucracy. In *Organization Theory: From Chester Barnard to the Present and Beyond*, ed. Oliver Williamson, pg. 116-153. New York: Oxford University Press.

⁷⁵ In recent years, the increasing interdependence of nations has led to a weakening in the principle, and, in the European Union, given rise to the concept of "subsidiarity." Under this notion of subsidiarity, rules negotiated internationally can be applied domestically where the matter to be regulated has a transboundary effect that can not be managed adequately at the domestic level (Lang. 1996. Negotiation as Diplomatic Rule-Making).

⁷⁶ This treaty, which codifies long-standing customary law, is the frame of reference for negotiators regarding the conclusion, ratification and termination of treaties.

⁷⁷ Lang. 1996. Negotiation as Diplomatic Rule-Making.

⁷⁸ As exceptions to these rules have been made with increasing frequency in past decades, outside influences on committee chairs have increased (Kelman. 1987. *Making Public Policy*).

ability to use this power effectively may vary from individual to individual. However, those actors who might be somewhat less effective in using their authority are likely to be strongly supported by other coalition members such that the coalition as a whole retains control of the decision-making authority.

Like decision-making authority, inducements as a source of power are ultimately derived from system-wide parameters rather than the innate qualities of subsystem actors. Various actors may bring to the subsystem capabilities to provide inducements, such as economic wealth or societal influence. The origins of these inducements, however, generally lie beyond the boundaries of the subsystem.⁷⁹ Similarly, normative inducements are very much dependent on fundamental socio-cultural values. Offering to portray a decision-maker as a savior of the environment will only serve as an inducement if society in general places a high value on environmental protection.⁸⁰ Coercive inducements, such as removal from office, will only work if the constitutional structure provides for this.

Persuasiveness and deference as sources of power can be derived from both system-wide parameters and the innate qualities of the coalition actors themselves. They are derived from system-wide parameters to the extent that their efficacy is a function of the position or office rather than the individual. People are more likely to defer to, and receive with greater amenity a message delivered by, an individual holding a position of authority or having significant wealth than an individual without such a position or wealth.⁸¹ Much of the media's power to persuade

⁷⁹ For example, the economic wealth necessary to provide such inducements as votes, industry relocations, etc., resides for the most part within large economic institutions—industrial corporations, banks, utilities, insurance companies and investment firms. While individuals having positions of presidents, officer-directors, and directors of these institutions may control how this wealth is used, the power of the inducements resides in the wealth of the institutions themselves, which in turn are defined by the distribution of natural resources, socio-cultural values, and constitutional structures. Dye points out that that this power tends to be concentrated among a relatively few individuals. In the United States, only about 4,300 individuals—two one-thousandths of 1 percent of the population—control more than one half of the nation's industrial assets, two thirds of all banking assets, one half of all assets in communications and utilities, and more than two thirds of all insurance assets. The five largest industrial corporations—General Electric, General Motors, Ford Motors, IBM and Exxon—control 28 percent of all industrial assets (Dye, Thomas R. 1990. *Who's Running America? The Bush Era*. Englewood Cliffs: Prentice-Hall, Inc).

⁸⁰ For instance, Greenpeace and others environmental groups suggested that Prime Minister Gro Brundtland reputation for environmental concern, and that of the Norwegian government in general, would suffer if she allowed commercial whaling to continue (Peterson. 1992. Whalers, cetologists, environmentalists, and the international management of whaling).

⁸¹ Much of the power of individuals from nation's large foundations to influence policy rests in their ability to channel corporate and personal wealth into financial support for and the direction of policy analyses conducted by universities and non-governmental organizations (Dye. 1995. *Who's Running America? The Clinton Years*). For example, David Rockefeller, when asked about how he exerts power, responded:

“we accomplish things through cooperative action, which is quite different than exerting power in some mysterious and presumably evil way. I have no power in the sense that I can call anybody in the government and tell them what to do. Because of my position, I'm more apt to get through on the telephone than somebody else, but what happens to what I suggest depends on whether they feel this make sense in terms of what they are already doing (cited in Dye. 1995. *Who's Running America? The Clinton Years*).

The degree to which individuals tend to be granted deference also tends to be a function of societal norms. Several studies of administration in developing countries point out that orders from a superior may be obeyed as a function

is a function of its acceptance by the public as legitimate and authoritative.⁸² However, persuasiveness and deference are also very much a function of the actors themselves. A skilled orator can deliver a highly persuasive argument even if the facts supporting it are weak, while the most compelling set of facts can be rendered useless if the individual presenting them is unable to assemble them into a coherent argument.⁸³

4.3.3. Overlapping Subsystems

Another facet of the system-wide environment that has particularly important implications for policy implementation is overlapping subsystems. Subsystems overlap when policies arising in one subsystem affect or are affected by policies arising from the others. Overlap among subsystems within the same political system is generally created by that system's legal structure. However, it can also occur among subsystems in different political systems, a situation that occurs in the development and implementation of international treaties.

Overlapping subsystems make the process of policy implementation difficult, as policies arising from one can negate those developed in the other. As coalition actors in one subsystem discover that they lack the political resources necessary to use effective guidance instruments within a subsystem, they tend to "shop around" for powerful individuals receptive to their influence. In doing so, they frequently appeal to processes in overlapping subsystems to obtain a change in budget, legal authority or simply a conflicting policy decision.⁸⁴ Actors in the overlapping subsystems can minimize these adverse impacts if they coordinate their activities, but doing so presents significant challenges.

Overlapping Subsystems Defined

Overlapping subsystems are subsystems with the same or sufficiently related functional domains such that policies arising in one have an impact in the other. The extent of the overlap is determined by the degree to which political actors participate in both, and overlapping subsystems may be nested, interrelated, or both.

The greatest degree of overlap occurs in situations where subsystems are nested. Nested subsystems have the same or very similar functional domains and the boundaries of one or

of the personal following of that individual rather than from an acceptance of the authority of the position (Peters. 1989. *The Politics of Bureaucracy*).

⁸² Ungar. 1998. Hot crises and media reassurance: a comparison of emerging diseases and Ebola Zaire. Television is particularly powerful in this regard, as it is the "most trusted" medium of communication (*American Enterprise*, July-August, 1991, pg 96, cited in Dye. 1995. *Who's Running America? The Clinton Years*).

⁸³ Watkins, M. and S. Rosegrant. 1996. Sources of power in coalition building. *Negotiation Journal-On the Process of Dispute Settlement* 12, 1: 47-68; Lau, Smith, and Fiske. 1991. Political Beliefs, Policy Interpretations, and Political Persuasion.

⁸⁴ Baumgartner and Jones describe this approach as "venue-shopping." (Baumgartner and Jones. 1993. *Agendas and Instability in American Politics*). Coalitions frequently pursue multiple venues, often simultaneously, in a broad-based effort to achieve their objectives (Sabatier and Jenkins-Smith. 1997. *The Advocacy Coalition Framework: An Assessment*). On the wider international stage, proponents of certain policies opposed by important interest groups at home can be more easily introduced if they have been negotiated as part of an international deal, as illustrated by the acceptance of the agricultural consequences of a successful Uruguay Round in France, Japan, Canada and other countries (Crowe. 1993. *Foreign Policy-Making: Reflections of a Practitioner*).

several are completely enclosed by the other, larger and hierarchically superior subsystem. This nesting frequently occurs when the subsystems have different territorial boundaries.⁸⁵

Lesser degrees of overlap occur when subsystems are interrelated but not nested. This generally occurs when different functional domains subsystems of are sufficiently related such that a subset of actors in one subsystem is also part of the other. However, the relationship between them is not hierarchical because they are at the same level of government, have the same territorial domain, or are contained within different political systems.⁸⁶

Combinations of nested and interrelated subsystems give rise to a wide range of permutations. Policy regarding a particular issue might involve interactions of multiple functional subsystems in a given territory, nested territorial subsystems involving a given function, or both multiple functions and nested territories. Examples of some of these permutations are shown in Figure 4.3.

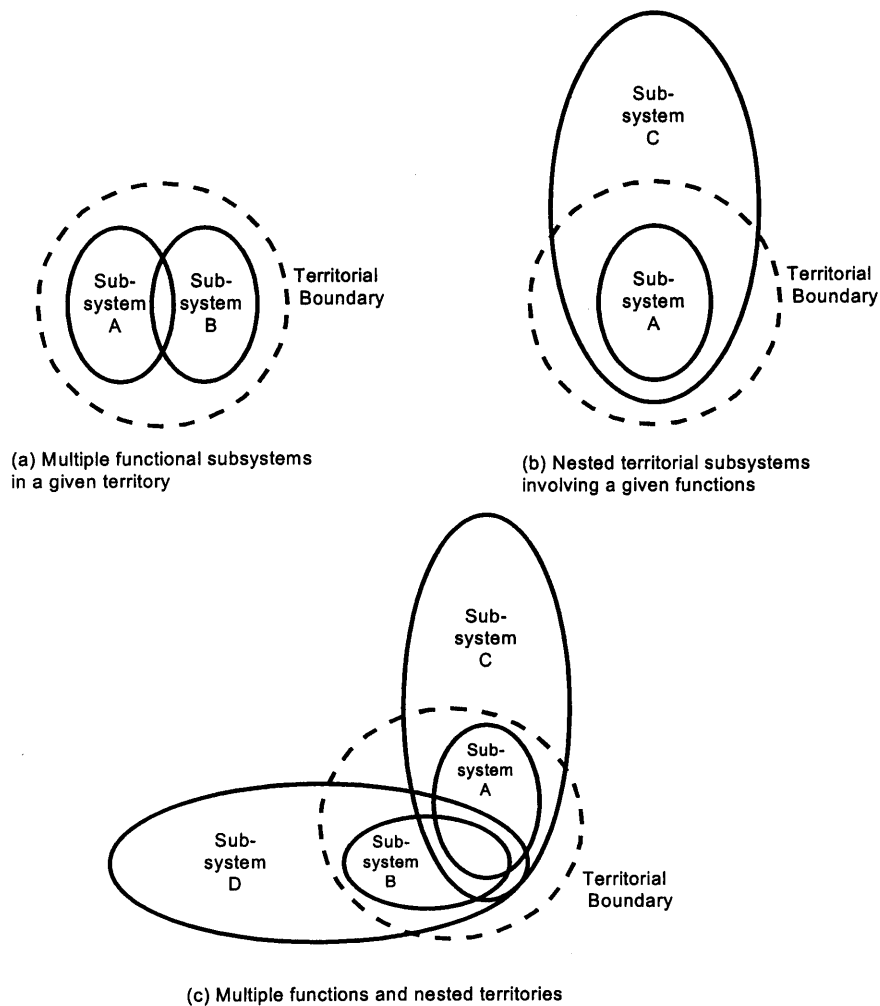
Power and Coordination in Overlapping Subsystems

The presence of overlapping subsystems presents a significant constraint on the power of a dominant coalition within a subsystem, as it must achieve some degree of coordination with those in the overlapping subsystems if it is to achieve its policy objective. Without coordination, policies developed in one subsystem may be thwarted, reversed, or otherwise hindered by those developed in the other. Because policies arising from a subsystem reflect the beliefs of dominant coalition, the extent to which policies in overlapping subsystems are coordinated ultimately depends on the extent to which they are each dominated by the same or parallel coalitions.

⁸⁵ For example, the U.S. welfare “subsystem” is, in fact, the group of state welfare subsystems nested within the larger national welfare subsystem. Most actors in each state welfare subsystem are part of the national welfare subsystem, as they all involved at some level in developing or implementing the national welfare policies. Not all actors in the national welfare subsystem, however, are part of a given state welfare subsystem (Sabatier and Jenkins-Smith. 1997. *The Advocacy Coalition Framework: An Assessment*).

⁸⁶ Examples of interrelated subsystems within the same system include national foreign, defense and international trade policy; energy and air pollution; and agriculture and water quality. An example of overlapping subsystems contained within different political systems is cooperation between two countries to control transboundary air pollution.

Figure 4.3 Variations In Nested and Overlapping Policy Subsystems



Actors in overlapping subsystems can be expected to coordinate their behavior only when the subsystems are interdependent, are not engaged in serious policy conflicts with each other, and are relatively free of serious internal conflicts.⁸⁷ A common function will not necessarily lead individuals and organizations cooperate with each other or to coordinate their activities when internal value conflict is high, as much of their energy will be focused on the struggle for domination within their own subsystem.

Conflicts among subsystems are least likely to occur where the overlapping subsystems are dominated by “parallel” coalitions, i.e., coalitions whose actors share many of the same or complementary beliefs and have the same or complementary policy objectives. In some situations, these parallel coalitions may in fact be comprised of the same actors, and are

⁸⁷ Zafonte and Sabatier. 1998. Shared beliefs and imposed interdependencies as determinants of ally networks in overlapping subsystems. It should be noted here that, while a number of policy elite theorists have suggested that these problems of coordination are resolved by a “central core” of authoritative private mediators who act as power brokers among the different subsystems, fairly strong empirical evidence.

distinguished only by the functional or territorial domain of the subsystem in which they are active.

While an absence of value and policy conflicts creates conditions conducive to cooperation among overlapping subsystems, there must also be some degree of interdependence if cooperation is to be ensured. Functional interdependence occurs when the behavior of actors in one subsystem actually affects the ability of actors in the other to achieve their political goals and vice-versa. If the actions of the first affects the second, but those of the second do not affect the first, the two are not interdependent, as coordination becomes the choice of the first. Alternatively, the two subsystems may have what Chisholm has labeled an “imposed interdependency”, i.e., they are part of a larger system that has the authority to set rules affecting both.⁸⁸

Given these conditions, the degree to which the policy processes in multiple overlapping subsystems are coordinated depends largely on the nature of the overlap. Cooperation is least likely to occur among functionally and territorially different subsystems. Differences in functional domains reduce the possibility that the actors are interdependent, as policies arising from one may not affect the other. Because the subset of actors participating in both subsystems is smaller, the probability that each is dominated by a different coalition is higher, in turn increasing the likelihood of conflicts in both values and policy. Cooperation becomes even more difficult as the number of subsystems that overlap increases, as this reduces the probability of interdependence and increases the number of potential or real value or policy conflicts.

Cooperation is most likely to occur among nested subsystems. Actors in these subsystems are more likely to be interdependent (through either functional or imposed interdependence), as policies developed in each are quite likely to affect the other. Most importantly, because many of the same actors participate in both subsystems, the possibility of serious value or policy conflicts is reduced by the increased likelihood that each subsystem is dominated by the same set of political actors.⁸⁹

Overlapping Subsystems in International Treaty Negotiation and Implementation

The development and implementation of international environmental treaties involves coordination among multiple policy subsystems within the same and different political systems.⁹⁰

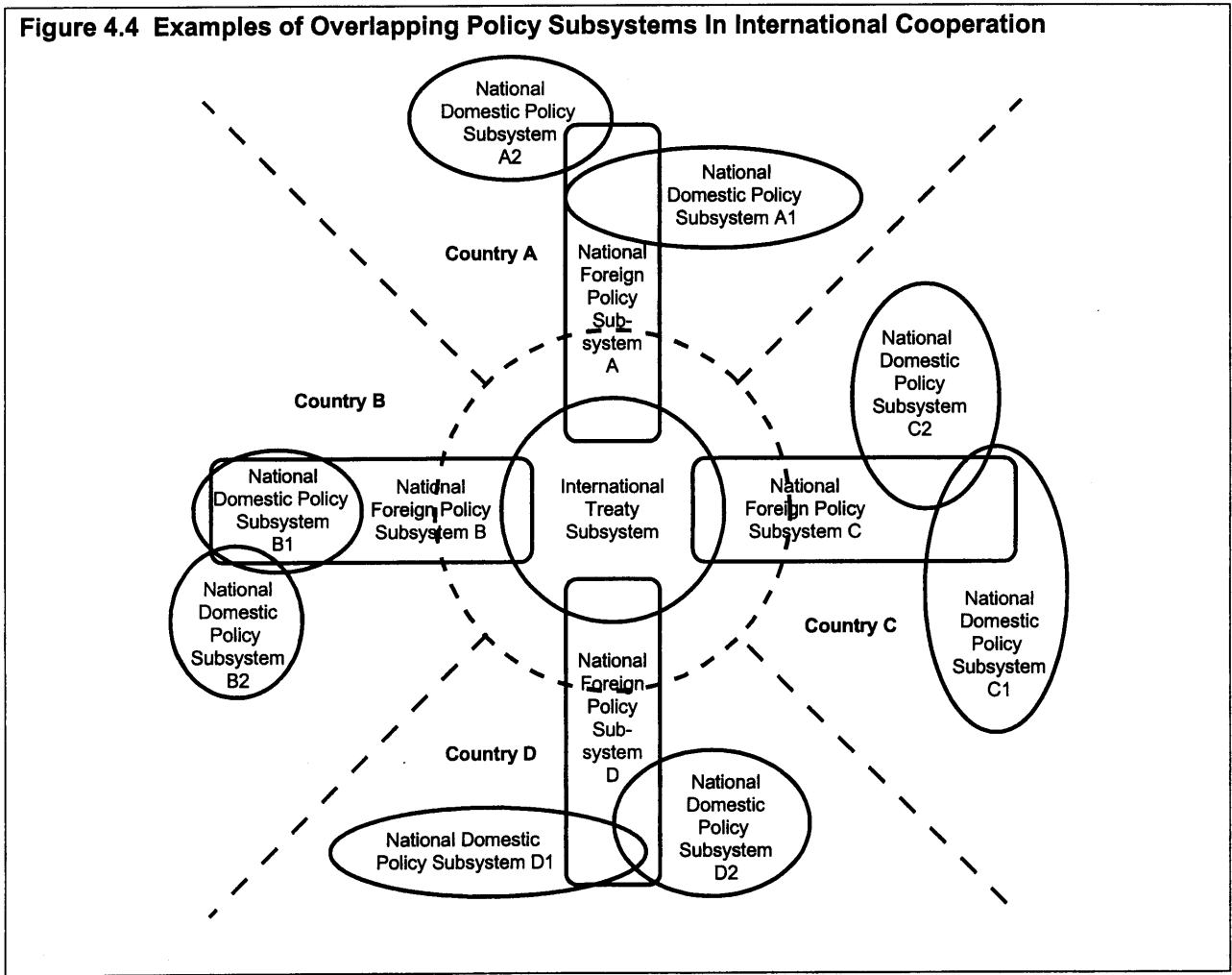
⁸⁸ Chisholm, D. W. 1989. *Coordination Without Hierarchy: Informal Structures in Multiorganizational Systems*. Berkeley: University of California Press.

⁸⁹ An important aspect of this overlap is bureaucratic competition (Peters. 1989. *The Politics of Bureaucracy*; Niskanen, William A. 1979. Competition among Government Agencies. *American Behavioral Scientist* 22: 517-24; Downs. 1966. *Inside Bureaucracy*). This competition is most frequently played out through the budget process without the involvement of elected officials, and occurs not only among different government agencies but among different units with a single agency. As a result, “priority setting in the bureaucracy resembles nineteenth-century capitalism; priorities are established by aggressive entrepreneurs at the operating levels of government” (Natchez, Peter B. and Irving C. Bupp. 1973. Policy and Priority in the Budgetary Process. *American Political Science Review* 67: 963).

⁹⁰ Keohane and Nye argue that modern international politics are characterized by multiple channels of contact among states and societies that blur the distinction between domestic and international politics, and that the availability of partners in political coalitions is not limited by national boundaries (Keohane, Robert O. and Joseph S. Nye, eds. 1972. *Transnational Relations and World Politics*. Cambridge, MA: Harvard University Press). International environmental law itself serves to integrate national economies, as the activities international law regulates

In particular, coordination may be required among overlapping international subsystems, national foreign subsystems, and various different domestic policy subsystems. Figure 4.4 suggests possible variations in these overlapping subsystems.

The first area of overlap is among one or more international policy subsystems and multiple national foreign policy subsystems. These international and national foreign policy subsystems are interrelated because many of the government and NGO representatives involved in the international policy subsystem also play important roles in the formation of their respective national foreign policy positions. However, these foreign policy subsystems are not subordinate to the international subsystem because of the limits national sovereignty places on the scope of international treaties.



generally occur within the borders of states. As Raustiala points out, “the locus of political attention is domestic, but the locus of political activity is international: it is not just at the national but at the international level that important new legal and political decisions are made.” (Raustiala, 1997. States, NGOs, and international environmental institutions).

National foreign policy subsystems may also overlap with one or more domestic policy subsystems. In the case of climate change, national climate change foreign policy subsystems may overlap with national domestic energy policy subsystems, transportation policy subsystems, and others. These national-level subsystems are most likely to be inter-related without being nested; they would be nested if the development and implementation of the foreign and domestic policies occur through the same processes, involve many of the same actors, and there is a hierarchical relationship among the institutions involved.

In many countries, these national foreign and domestic policy subsystems also overlap with a number of state or local domestic policy subsystems.⁹¹ The degree to which these sub-national subsystems are nested within national policy subsystems depends on the country's political system. Nested subsystems are more likely to occur in countries like Japan that have strong central governments, while they are less likely to occur in countries like the United States and Germany that have a federal system of government.

It should be noted here that the existence of the European Union adds yet one more layer of complexity for European countries. EU institutions such as the European Commission, the Council of Ministers and the European Parliament are increasingly displacing national institutions as the principal loci of policy change, including the coordination of foreign policy on certain issues.⁹² However, national institutions remain largely responsible for implementation, creating a situation in which the implementation of environmental treaties involves coordination among overlapping subsystems at four or more different levels of government.

4.4 RELATIVE POWER AND SUBSYSTEM DOMINANCE

The potential for a coalition to achieve its political objectives is a function of the power that it possesses. All coalitions active within a subsystem can be expected to employ whatever political resources they have at their disposal, no matter how limited. However, those coalitions with the political resources sufficient to employ the more costly, but more effective, guidance instruments are likely to succeed over those with fewer resources. The degree to which a coalition can dominate a subsystem, therefore, is a function of that coalition's power relative to that of other coalitions. The greater a coalition's relative power, the more likely that it will dominate the subsystem and ensure that policy outcomes are consistent with its belief system and policy objectives.

The power distribution of the various actors involved in the subsystem at any given point in time is very difficult to predict. Actors in one coalition might have the power of formal decision-making authority, but actors in another coalition might have substantial power of inducements and persuasion. In many situations, actors in different coalitions may share decision-making authority, have substantial powers of inducements, persuasion, and deference, and employ many different forms of strategic skill. Measuring these, and comparing each against the others, presents substantial methodological difficulties.

⁹¹ In the United States, for example, transportation policy is generally set at the state level, with national authority only extending to the use of federal funds.

⁹² Sabatier and Jenkins-Smith. 1997. The Advocacy Coalition Framework: An Assessment; Peterson, John. 1995. Decision-Making in the European Union: Towards a framework of analysis. *Journal of European Public Policy* 2, 3: 69-93. The emerging role of the EU in the context of climate policy is discussed in greater detail in Chapter 9.

Like belief systems, a coalition's relative power at any given time may be best determined by examining the interactions among the subsystem coalitions and the extent to which the policy outcomes reflect the beliefs of one coalition or another. A policy outcome that reflects strongly the belief system of a single coalition (i.e., there appears that little compromise occurred) suggests that the majority coalition has significantly more power than minority coalitions. However, a policy outcome containing elements of several coalitions' beliefs systems reflects more of a balance of power such that coalitions were forced to compromise.

As a first step towards operationalizing this conceptualization of political power independent of policy success, I suggest that the five sources of power described in this chapter can be separated into two categories: (1) primary sources of power, and (2) secondary sources of power. Primary sources of power are those sources that enable the possessors with direct control over the decisions being made within the subsystem. Decision-making authority is the most clear-cut example of such a source of power. However, I also suggest that the ability to offer inducements can be a primary source of power when those inducements are sufficient to compel the cooperation of those possessing the decision-making authority. Such an inducement would be along the lines of "an offer that can't be refused." Although such an inducement could be positive, it is more likely to be negative, such as a credible threat of retaliation or actions that would effectively negate the decisions being made. Secondary sources of power are those sources that depend on circumstance or the receptivity of those possessing decision-making authority in order to have the desired effect. These include persuasion, deference, and strategic skill. The ability to offer inducements can also be considered a secondary source of power when the inducements by themselves are not sufficient to compel favorable decisions. I describe a proposition that can be used to examine the relationships among these primary and secondary sources of power and policy change, as well as several other propositions that can be used to analyze the interactions among international and domestic policy processes, in the following chapter,

CHAPTER 5 - THE DYNAMICS OF POLICY CHANGE AND TREATY IMPLEMENTATION

The description of policy subsystems and coalition interactions given thus far is a static “snapshot” of the policy process at a given point in time (i.e., a year or so). Policy implementation, however, is a dynamic process that occurs over time. Sabatier argues that understanding policy change requires a time perspective of a decade or more, and much of the literature on policy implementation suggests that such a time period is necessary to complete at least one cycle of formulation, implementation, assessment, and reformulation.¹

If the policies arising from a subsystem at any point in time reflect the belief system of the coalition dominating the subsystem, then policy change over time is determined by the degree to which these beliefs change, the distribution of power among coalitions changes, or some combination of the two. Because the processes through which belief systems change tend to be slow and incremental, substantial changes in policy tend to be driven by shifts in power resulting from perturbations to the subsystem. In this chapter, I suggest how the various elements of the ACF and the various sources of coalition power interact over time in the dynamic process of policy change. I then describe how all of these elements come together in the process of treaty implementation, and suggest some propositions that can be used to explore this process.

5.1 THE DYNAMICS OF POLICY CHANGE OVER TIME

As a government program is implemented, the coalitions engaged in the development of the program may revise their beliefs or alter their strategies according to their perceptions of the adequacy of the decisions, the policy outputs, their effects on the problem as well as any side effects, and any new information that arises from research or dynamics external to the subsystem. It may then seek changes in the initial government program or more minor changes in the various policy outputs of the program. It may also attempt to change subsystem policies by altering critical system-wide parameters, such as the system-wide governing coalition.²

¹ A focus on short-term decision making tends to underestimate the influence of policy analysis, a tool that is important to those who have little power other than that of persuasion (Sabatier. 1993. *The Advocacy Coalition Framework*). Weiss argues that policy analysis is used primarily to alter the perceptions and conceptual apparatus of policy makers over time (Weiss, Carol H. 1977. *Research for Policy's Sake: The Enlightenment Function of social research. Policy Analysis 3*, Fall: 531-545). This is consistent with Lindblom and Cohen's suggestion that it is the cumulative effect of findings from different studies and from ordinary knowledge that has the greatest influence on policy (Lindblom, Charles E. and David Cohen. 1979. *Usable Knowledge*. New Haven: Yale University Press). See also Mazmanian, Daniel A. and Paul A. Sabatier. 1989. *Implementation and Public Policy*. Lanham, MD: University Press of America.

² Sabatier. 1993. *Policy Change over a Decade or More*. It should be noted here that, in certain situations, coalitions may be willing to enter negotiations in the hope of finding a compromise if they all view the status quo as unacceptable (Sabatier and Jenkins-Smith. 1997. *The Advocacy Coalition Framework: An Assessment*). This tends to occur when each coalition has the ability to impose unacceptable costs. The end result of such a process is not a dominant coalition and several minority coalitions but what might be regarded as “power sharing” among coalitions. This is analogous to a “grand coalition” in parliamentary systems or the tradition of consensus negotiations in such countries as Switzerland or the Netherlands. These “consensus regimes” are likely to be quite unstable, however, unless the arrangement produces a distribution of benefits over time that all coalitions regard as “fair” and new leaders committed to consensus replace old “warriors” within the coalitions.

One of the major strengths of the ACF is that it provides a relatively clear-cut criterion for distinguishing “major” from “minor” policy change. Major change is change in the policy core aspects of a policy or program, whereas minor change is change in the secondary aspects. Thus it is the topic and scope of policy change that determines whether it is major or minor. In situations involving nested subsystems, a change may be “minor” for the larger subsystem but “major” for the subsystem nested within it.³

5.1.1. Policy Change Through Changes in Beliefs

If one or more subsystem coalitions revise their beliefs in response to their perceptions of the effects of the policy outputs, new information or other factors, they may seek to revise subsystem policies in order to make them conform to these revised beliefs. Coalitions beliefs may change as a result of learning, turnover among subsystem actors, or some combination of the two. Both of these processes tend to be incremental in nature and focused on secondary aspects rather than policy core beliefs. As a result, they generally do not cause major changes in policy.

Learning

As discussed in the previous chapter, policy-oriented learning is the change over time in the distribution of beliefs among actors within a coalition or among coalitions within the subsystem. While important aspects of this learning are policy analysis and the exchange of information, the learning process itself is an ongoing exercise of exploration and adaptation in which actors experiment with a variety of guidance instruments and other implementing mechanisms over time to achieve their policy goals. They re-examine their strategies when they become dissatisfied with the performance of any of these various mechanisms, either in terms of its policy outputs or in the ability of these outputs to address the problems satisfactorily.⁴ Because they filter new information through their existing beliefs, however, they tend to accept information confirming existing beliefs and screen out dissonant information. As a result, changes in beliefs are generally very difficult to achieve.

When learning does take place, it usually affects the secondary aspects of belief systems rather than the policy core.⁵ Much of the policy core consists of deeply held normative beliefs that are very difficult to change through the presentation of empirical evidence. Actors may occasionally alter aspects of their policy core beliefs on the basis of information coming from others within the same coalition.⁶ However, this almost always requires what Weiss refers to as “enlightenment”—the accumulation of considerable evidence from a variety of sources for over a decade or more.⁷ Even changes to secondary aspects, which are those aspects of belief systems that are most susceptible to empirical challenge, can take several years.

³ For example, changing automotive emission standards may be “major” for the U.S. automotive pollution control subsystem but relatively minor for the larger air pollution control subsystem (Sabatier and Jenkins-Smith. 1997. *The Advocacy Coalition Framework: An Assessment*).

⁴ Jenkins-Smith and Sabatier. 1993. *The Dynamics of Policy-Oriented Learning*.

⁵ Jenkins-Smith and Sabatier. 1993. *The Dynamics of Policy-Oriented Learning*.

⁶ Eberg, Jan 1997. *Waste Policy and Learning: Policy Dynamics of Waste Management and Waste Incineration in the Netherlands and Bavaria*. University of Netherlands.

⁷ Weiss. 1977. *Research for Policy's Sake: The Enlightenment Function of social research*.

Despite these difficulties, major policy change through learning can and does occur in subsystems at all levels of governance. For example, a major factor in the shift in the 1990 Clean Air Act Amendments from a “command-and-control” approach to controlling emissions of air pollutants to the tradable permit system was the recognition and subsequent support by the Environmental Defense Fund and others in the environmental community that the flexibility provided by this market-based approach can result in greater improvements in air quality.⁸ Similarly, the change in the international regime controlling ocean dumping of low-level radioactive waste from initially permitting the dumping of low-level waste to prohibiting the dumping of this waste has been linked to a change in views by those initially opposed to the prohibition.⁹

Turnover Within Coalitions

The belief system of a coalition as a whole can also change through changes in the actors of which it is comprised. Although coalitions themselves tend to be relatively stable over time, there may be a substantial amount of turnover within the coalition as individuals are promoted, change jobs and organizations, and retire. For example, some civil service systems require its officials to change positions every few years in order to ensure that they are not “captured” by local interests.¹⁰ As a younger generation of actors start to replace those actors who were involved at the beginning of the policy process, they can bring new perspectives and ideas to the table.

5.1.2. Policy Change Through Shifts in Power

Policies can change more dramatically when the distribution of power among subsystem coalitions changes, particularly if a minority coalition gains dominance. In mature subsystem, the primary sources of power of the dominant coalition tend to be institutionalized, i.e., derived from system-wide parameters. Thus shifts in the distribution of power within a subsystem are usually caused by system-wide events such as elections or changes in socio-economic conditions. The impact of these events can be substantial over the course of a few years or a decade and provide political actors with “windows of opportunity” to gain power.¹¹

Institutionalized Power and the Potential for Change

⁸Cohen, Richard. 1992. *Washington at Work: Back Rooms and Clean Air*. New York: Macmillan, in Sabatier. 1993. Policy Change over a Decade or More.

⁹Lidskog, R. and G. Sundqvist. 2002. The role of science in environmental regimes: The case of LRTAP. *European Journal of International Relations* 8, 1: 77-101. See also Bressers and Rosenbaum. 2000. Innovation, learning, and environmental policy: Overcoming “a plague of uncertainties”; Clark, Eindoven, and Jaeger. 1999. *Learning to Manage Global Environmental Risks: A Comparative History of social Responses to Climate Change, Ozone Depletion and Acid Rain*; Haas. 2000. International institutions and social learning in the management of global environmental risks; Jenkins-Smith, Hank. 1988. Analytical Debates and Policy Learning: Analysis and Change in the Federal bureaucracy. *Policy Sciences* 21: 169-212; Ulph and Maddison. 1997. Uncertainty Learning and International Environmental Policy Coordination.

¹⁰Wilson. 1989. *Bureaucracy: What Government Agencies Do and Why They Do It*.

¹¹Sabatier. 1993. Policy Change over a Decade or More; Kingdon. 1984. *Agendas, Alternatives, and Public Policies*.

A coalition's ability to remain dominant in a subsystem over time depends very much on the degree to which its sources of power are institutionalized, that is, derived from system-wide parameters rather than qualities inherent to particular coalition members.¹² As coalition members enter and leave the subsystem, those coalitions whose power is institutionalized are more likely to be able to maintain more power relative to those whose power is derived from the individuals themselves, and thus come to dominate the subsystem. A coalition that derives much of its power from a few actors with unique persuasive abilities or strategic skill will lose power if these actors leave the subsystem. On the other hand, a coalition losing an individual possessing power derived from system-wide parameters, such as decision-making authority or the ability to offer inducements, does not necessarily lose power if he or she is replaced with an individual who holds similar beliefs and cooperates with other coalition actors.¹³

The logical extension of this is that those sources of power derived from system-wide sources, in particular decision-making authority and the ability to offer inducements, are more important to a coalition in the long run than those sources of power derived from qualities unique to particular individuals. Over time, that coalition with individuals having decision-making authority and the ability to offer inducements is most likely to become dominant and then maintain their dominance until such time that the power of these individuals is altered by external events.

External Events and Shifts in Power

Three types of system-wide events can cause a change in the distribution of power: changes in socioeconomic conditions and technology, system-wide political events, and policy decisions and impacts from other subsystems.¹⁴ These events can alter directly a coalition's sources of power by causing powerful actors to leave the subsystem, change the power of those remaining in the subsystem, and cause new actors enter the subsystem and assume power. System-wide events may also affect a coalition's power indirectly by changing some of the basic system parameters, although this tends to occur over a longer time period.

Changes in Socioeconomic Conditions and Technology

Changes in socioeconomic conditions and technology can affect a subsystem in a number of ways. These changes can undermine the causal assumptions of the present policies or

¹² As Berle points out, "power is invariably organized and transmitted through institutions. Top power holders must work through existing institutions, perhaps extending or modifying them, or must at once create new institutions. There is no other way of exercising power." (Berle. 1967. *Power*). C. Wright Mills likewise observes that "no one...can be truly powerful unless he has access to the command of major institutions, for it is over these institutional means of power that the truly powerful are, in the first instance powerful." (Mills. 1956. *The Power Elite*).

¹³ This scenario is most likely to occur if the departure is due to personal reasons, as the coalition losing the individual is likely to be able to control the replacement process.

¹⁴ Sabatier refers to the second type of system-wide event as changes in systemic governing coalitions, but goes on to suggest that more limited but still important changes can occur when the systemic governing coalition loses power but does not actually change. He also suggests that these changes are caused by such political events such as elections. Referring to this second type of events as "system-wide political events" captures his intent more accurately (Sabatier. 1993. *Policy Change over a Decade or More*).

significantly altering the political support of various coalitions.¹⁵ In doing so, they can change the value of inducements and persuasion as sources of power.¹⁶ For example, the growth of the Internet in the 1990s provided a new, inexpensive means for NGOs to communicate, enhancing their ability to organize and exchange information through transnational networks and mobilize public support for their views.¹⁷ These changes can also have an indirect effect by causing basic system parameters to change. A number of observers suggest that the tremendous growth of the environmental movement in the United States that began in the mid-1960's marked the beginning of a fundamental shift in cultural values. This shift helped environmentalists and other public interest advocates obtain in the early 1970's radical changes in both air and water pollution laws.¹⁸ Similarly, international efforts to phase out the production and use of CFCs made little progress until it became clear in the mid-1980s that viable alternatives were available, after which they gained significant momentum.¹⁹

System-Wide Political Events

At the national and subnational levels, system-wide political events such as elections can bring about policy change within subsystems by causing turnover among coalition actors and altering the various sources of power held by those remaining. For example, substantial change is likely to occur if political party, in assuming control of the political system as a whole after a "critical election", is able to replace most or all individuals from the dominant coalition that have decision-making authority with individuals from a minority coalition.²⁰ A change in the political

¹⁵ Sabatier. 1993. *The Advocacy Coalition Framework*.

¹⁶ For example, the Marshall Plan to help the post war recovery of Europe was making little progress in Congress until, in 1948, the Communists took over Czechoslovakia in a coup d'etat—after which the act passed immediately (Hilsman. 1990. *The Politics of Policy Making in Defense and Foreign Affairs: conceptual models and bureaucratic politics*).

¹⁷ Mathews. 1997. *Power Shift*; Zelwietro, Joseph. 1998. *The Politicization of Environmental Organizations through the Internet*. *Information Society* 14: 45-56.

¹⁸ For example, public furor caused by the mishandling by both business and government of the toxic waste contamination problems at Love Canal in the late 1970's spurred the U.S. Congress to take a new "shovels first, lawyers later" approach in crafting the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (Layzer, Judy. 1998. *Case Studies in Environmental Politics*. Cambridge: MIT Project on Environmental Politics and Policy). Mazmanian and Morell write that "Love Canal was one of those rare catalytic events, one of those seemingly isolated incidents that so often throws an entire nation into turmoil. This unpredictable turning point...bared both the sensitive chemophobic nerve lurking just below the surface of American public consciousness and the growing lack of trust in both business and government expertise" (Mazmanian, Daniel A. and David Morell. 1992. *Beyond Superfailure: America's Toxics Policy for the 1990s*. Boulder: Westview Press, pg 6). See also Rosenbaum. 1998. *Environmental Politics and Policy*; Milbrath, Lester. 1984. *Environmentalists: Vanguard for a New Society*. Albany: SUNY Press; Dunlap, Riley E. and K. Van Liere. 1978. *The New Environmental Paradigm*. *Journal of Environmental Education* 9, 4: 10-19; Hays, Samuel P. 1987. *The Politics of Environmental Administration*. In *The New American State: Bureaucracies and Policies Since World War II*, ed. Louis Galambos, pg. 21-53. Baltimore: Johns Hopkins University Press; Quarles, John. 1976. *Cleaning Up America: An Insider's View of Environmental Protection*. Boston: Houghton Mifflin Company; Harris, Richard A. and Sidney M. Milkis. 1989. *The Politics of Regulatory Change: A Tale of Two Agencies*. New York: Oxford University Press.

¹⁹ Benedick, Richard Elliot. 1991. *Protecting the Ozone Layer: New Directions in Diplomacy*. In *Preserving the Global Environment: The Challenge of Shared Leadership*, ed. Jessica Tuchman Mathews, pg. 362. New York: W.W. Norton and Company.

²⁰ Sabatier points out that these critical elections are relatively rare in countries such as the United States where the

party controlling one part of the political system can also bring changes. For instance, after the Reagan administration took over the White House in 1980, it was able to make significant changes in national environmental policies even though the Democratic Party still controlled both houses of Congress.²¹

Policy Decisions and Impacts from Other Subsystems

The third type of external event is policy decisions and impacts from other subsystems. These decisions and impacts may arise from overlapping subsystems or from a completely independent subsystem. They may be in the form of procedural rules or decisions, budgetary decisions, or changes in political jurisdictions that can affect both direct and indirect effects a coalition's sources of power directly or indirectly. For example, members of Congress frequently use the appropriations process to affect decisions being made within executive agencies that they could not otherwise control.²² Rules governing service within the bureaucracy can remove key individuals from a dominant coalition, causing it to lose such powers as deference or strategic skill.²³ Similarly, changes in rules governing subsystem procedures can provide coalitions with new or additional strategies through which to pursue their objectives.²⁴

5.1.3. Treaty Implementation And Policy Change

All of these different elements and dynamic processes can be brought together to provide an "ACF" perspective on the development and implementation of international environmental treaties.²⁵ In this perspective, an international regime is created within an international policy

executive and legislative functions are separated, as it normally requires that the same coalition control the chief executive's office and both houses of the legislature. They may occur more frequently in countries such as Japan and the United Kingdom that have parliamentary systems of government, as the coalition that is able to dominate the legislature automatically assumes control of the Chief Executive's office (Sabatier. 1993. Policy Change over a Decade or More).

²¹ Hammond, T. H. and Jack Knott. 1996. Who controls the bureaucracy?: Presidential power, congressional dominance, legal constraints, and bureaucratic autonomy in a model of multi-institutional policy-making. *Journal of Law, Economics and Organization* 12, 1: 119-166; Steunenberg, B. 1992. Congress, Bureaucracy, and Regulatory Policy-Making. *Journal of Law, Economics and Organization* 8, 3: 673-694.

²² Hammond and Knott. 1996. Who controls the bureaucracy?: Presidential power, congressional dominance, legal constraints, and bureaucratic autonomy in a model of multi-institutional policy-making; Steunenberg. 1992. Congress, Bureaucracy, and Regulatory Policy-Making.

²³ In Japan, for example, career bureaucrats within the administration are expected to move to a different position every two to three years, and the careers of U.S. Foreign Service members are built on two-year rotating assignments.

²⁴ For example, Congress passed the Data Quality Act in response to complaints by industry groups that they were not able to gain access to data EPA used to support strengthened air quality regulations. This act allows members of the public to challenge the accuracy of data used to support administrative rulemaking. In doing so, it provided industry groups with an additional mechanism through which to challenge regulatory actions undertaken by EPA and other agencies (Herrick, Charles N. 2004. Objectivity versus narrative coherence: science, environmental policy, and the U.S. Data Quality Act. *Environmental Science & Policy* xxxx, xxxx).

²⁵ In commenting on the interactions between domestic politics and international negotiations, Crowe states: "What emerges for the practitioner is the complexity of the situation: the number of issues which the diplomat must deal with, the number of countries with which he must negotiate in dealing with them, the multilateralization of such international dealings and the proliferation of fora. These impose great demands in terms not only of time spent in travel and negotiations, which seems to increase exponentially as the number of participants rises, but also of time

subsystem in which several coalitions compete to embed their belief systems in the treaty being developed. National policies regarding the regime are developed within overlapping national policy subsystems. While the national foreign policy subsystem may be responsible for the development of a nation's overall policy regarding a regime, other domestic policy subsystems, including local sub-national subsystems might also be responsible for the development and implementation of specific aspects of this policy.

The regime implemented when the relevant policies developed within these overlapping national and sub-national subsystem are changed to be consistent with those resulting from the international subsystem. The coalition interested in achieving implementation (the "implementing coalition") can do so relatively easily if the coalitions dominating the overlapping subsystems hold similar policy core beliefs. In these situations, the treaty negotiated in the international subsystem is likely to be compatible with the policy core beliefs of these other coalitions, and policy changes are likely to be needed only in the secondary aspects of these policies.

Implementation becomes more difficult when the treaty is inconsistent with the policy core beliefs of coalitions dominating the relevant national and subnational subsystems. In these situations, the implementing coalition must either seek to change the policy core beliefs of the dominant coalition or attempt to have the dominant coalition replaced with one holding more compatible beliefs.

As discussed in Section 5.1, a coalition's policy core beliefs can change through learning or the turnover among actors within the coalition. However, both of these processes is likely to be slow, taking place over the course of a decade or longer. Although the implementing coalition may try to speed the learning process through persuasion, those opposed to the treaty may be using persuasion to slow it down.

An implementing coalition is more likely to be successful if it can cause recalcitrant coalitions controlling important overlapping subsystems to be replaced by coalitions holding policy core beliefs more compatible with the treaty being implemented. They can do so by manipulating or otherwise taking advantage of external events such that the dominant coalition loses control of the subsystem and a parallel coalition gains power sufficient to dominate the subsystem.

5.2 PROPOSITIONS REGARDING SUBSYSTEMS, POWER AND TREATY IMPLEMENTATION

As was noted previously, a particular strength of the ACF is that specific hypotheses concerning the nature of policy change that can be tested empirically. In the remainder of this chapter, I suggest a number of propositions that can be used to test this ACF perspective on treaty implementation.²⁶ The first four of these, derived from the initial ACF hypotheses developed by

and effort spent in preparing negotiating positions nationally in the home capital among competing interests. At home many more players, representing what have in the past been purely domestic interests, have become involved both in formulating policy for international negotiations and in the negotiations themselves. The planeloads of travelers in and out of London every week from various government departments must be a major source of airline revenue." (Crowe. 1993. *Foreign Policy-Making: Reflections of a Practitioner*; pg 178).

²⁶ I am not at this point describing these propositions as hypotheses because of the difficulties in testing hypotheses

Sabatier and Jenkins-Smith, address dynamics within and among subsystems. The final proposition is based on the discussion of power contained in Chapter 4, and is intended to evaluate the relationship between coalition power and treaty implementation. In Chapter 11, I provide additional discussion of these propositions in the context of the four cases presented in Section III.

5.2.1. Propositions 1 And 2: Subsystem Dynamics And Policy Change

The first two propositions pertain to the relationship between subsystem dynamics and treaty implementation.

Proposition 1: Policy Change and Dominant Coalitions

Proposition (1): The policy core attributes of a domestic government program are most likely to be significantly revised to implement an international agreement when (1) the coalition that instituted the initial domestic program does not remain in power within the national subsystem, and (2) the international and national policy subsystems are dominated by parallel coalitions.

This proposition contends that, if dominant coalition in a national policy subsystem is not the same one that dominates the international policy subsystem, then the policy core attributes of national government programs will not change as long as the dominant coalition that instituted that policy remains in power. As a result, requirements of an international treaty are not likely to be fully implemented if they require major changes in national policy.²⁷ This is consistent with many observations concerning treaty compliance.²⁸ For example, Downs argues that most countries only sign on to treaties that require them to take steps that they are already taking or have planned.²⁹

From this, it follows that significant perturbations external to the national policy subsystems are a necessary condition for policy change if the coalition that dominated the international subsystem does not also dominate the national subsystem.

Proposition 2: Policy Change and External Events

Proposition (2): If the international and national policy subsystems are not dominated by parallel coalitions, then significant perturbations external to the national subsystem (e.g., changes in socioeconomic conditions, public opinion, system-wide governing coalitions, or policy outputs from other subsystems) are a

with only a single case study.

²⁷This proposition can be viewed as a corollary to the hypothesis proposed by Sabatier and Jenkins-Smith that policy core attributes of a government program in a specific jurisdiction will not be significantly revised as long as the advocacy coalition which instituted the program remains in power within that jurisdiction. However, I have modified it to take into account coalition dynamics at the international level (Sabatier and Jenkins-Smith. 1993. *Policy Change and Learning: An Advocacy Coalition Approach*).

²⁸See also Vogel, David. 1993. Representing Diffuse Interests in Environmental Policymaking. In *Do Institutions Matter? Government Capabilities in the United States and Abroad*, ed. R. Kent Weaver and Bert A. Rockman. Washington, D.C.: The Brookings Institution; and Chayes and Chayes. 1995. *The New Sovereignty: Compliance with International Regulatory Agreements*.

²⁹Downs, Rocke, and Barsoom. 1996. Is the good news about compliance good news about cooperation?

necessary, but not sufficient, cause of change in the policy core attributes of a national governmental program,

External changes are necessary to substantially alter the distribution of political resources among coalitions within the national subsystem. In the context of international relations, an external perturbation could be threats from a hegemon or international sanctions.³⁰ However, such perturbations are not, by themselves, sufficient to cause changes in national policy. The minority coalition must also be able to exploit the changed conditions such that it is able to achieve dominance and bring about the necessary policy changes.

5.2.2. Propositions 3 And 4: Actors, Coalitions, and Overlapping Subsystems

The second two propositions pertain to the relationships among overlapping subsystems and the effect of these relationships on treaty implementation.

Proposition 3: Actor participation in overlapping subsystems

Proposition (3): The degree to which the content of national government programs are changed to be consistent with an international agreement is directly related to extent to which significant actors the national policy subsystems traditionally responsible for the programs to be changed also participated in the national policy subsystem that was involved in negotiating the agreement.

This proposition argues that the extent to which national government programs are changed in response to an international agreement is a function of the extent to which the subsystems responsible for the programs are nested within the subsystem involved in negotiating the agreement. It is assumed here that the distribution of responsibilities among the various national subsystems is not changed in response to the agreement.³¹ Because actors (coalitions) in nested subsystems are more likely to share policy beliefs than those in policy subsystems with a lesser degree of overlap, the greatest degree of cooperation and coordination is expected to occur among the former subsystems. There is also more likely to be a greater correspondence in nested subsystems in the number of subsystem coalitions and the nature of the power dynamics within the subsystem. Finally, if policy-oriented learning is the only mechanism through which belief systems change and cooperation develops, then the greatest degree of cooperation is likely to occur in situations where significant domestic players in relevant national subsystems are able participate in the international fora in which policy-oriented learning is taking place.

Proposition 4: Overlapping Subsystems and Policy Change

Proposition (4): The degree to which national government programs are changed to be consistent with an international agreement is inversely related to the

³⁰ For example, substantial public pressure from the United States and other countries was widely credited with forcing Japan to change its position concerning the banning of whaling (Chayes and Chayes. 1995. *The New Sovereignty: Compliance with International Regulatory Agreements*).

³¹ The proposition is based on the finding by Zafonte and Sabatier that shared policy beliefs among subsystem actors are a primary factor in determining coordination among overlapping subsystems. (Zafonte and Sabatier. 1998. Shared beliefs and imposed interdependencies as determinants of ally networks in overlapping subsystems).

number of overlapping national (and sub-national) policy subsystems falling within the policy domain of the international agreement.

This proposition can be viewed as the converse of Proposition (3), and is very much consistent with much of the “bottom-up” literature on implementation. In general, the broader the policy domain of an international agreement, the more complex the national program will be to implement it. As the complexity of this national program increases, so does the number of different subsystems having responsibility for various aspects of it. Coordination and cooperation among subsystems increase as their numbers increase, making policy change less likely. Thus national policy change is most likely with international agreements that have a very limited scope, while it is less with agreements to deal with complex global problems such as climate change and the loss of biodiversity. In extreme cases, the problems of coordination may be so overwhelming that the implementation of complex international agreements may wind up being driven largely by external events, such as changes in socioeconomic conditions.

5.2.3. Proposition 5: Treaty Implementation and Sources of Power

The final proposition pertains to the relationship between coalition dynamics and sources of power:

Proposition (5): In the absence of external events, a government program is not likely to be changed in response to an international agreement unless the coalition advocating the change possesses, or is able to acquire, (1) decision-making authority or (2) the ability to offer inducements sufficient to compel the cooperation of those possessing decision-making authority.

With Proposition 5, I suggest that coalitions will not be able to cause substantial changes in government programs to implement international agreements solely through the use of persuasion, deference or strategic skill. This is primarily due to the difficulty with which policy core beliefs change and the large number of actors engaged in the multiple overlapping subsystems that mark treaty implementation. The large number of actors also increases the probability that opposing coalitions will be able to offer competing inducements unless one coalition is able to offer an inducement sufficiently compelling that it cannot be matched by the other coalitions.

SECTION III: CASE STUDIES
OF OVERLAPPING CLIMATE
POLICY SUBSYSTEMS

CHAPTER 6 - COALITIONS IN THE CLIMATE POLICY SUBSYSTEMS

This third section examines the development and implementation of the climate change regime between 1988 and 1997 in the context of the theoretical framework described in the previous section. The first chapter of this section describes the set of parallel coalitions active in the international climate policy subsystem and the climate policy subsystems of the United States, Japan, and the Netherlands. The political dynamics that transpired in these subsystems and several overlapping subsystems are described Chapters 7 through 10.

In the international climate policy subsystem, the individuals and organizations participating in international climate change debate coalesced into two coalitions: a “Precautionary” coalition and an “Economic Growth” coalition.¹ Within each of these coalitions, members shared a similar set of policy beliefs regarding key climate change policy issues and worked together during the various phases of the policy process in an effort to ensure that the policy outcomes reflected these beliefs. Precautionary and economic growth coalitions were also active in each of the national climate policy subsystems that were parallel to the two international coalitions in that many individuals were active in both coalitions and the membership as a whole held similar policy core beliefs. The methodology used for determining these coalitions and their beliefs is described in the Appendix.

6.1 THE PRECAUTIONARY COALITIONS

The “Precautionary” coalitions consists of those actors and organizations that are concerned that climate change presents a significant threat and believe that strong measures are necessary to address it. These coalitions are so named because most members embrace as a fundamental normative precept the “Precautionary Principle,” which holds that government action to forestall an environmental threat is legitimate and appropriate even when the science concerning that threat is uncertain.²

6.1.1. Beliefs of the Precautionary Coalitions

The policy core beliefs of the Precautionary Coalitions can be summarized as follows:

- Climate change presents a real and significant threat;

¹ This analysis focuses specifically on the coalitions that formed around the debate over the science and impacts of climate change and nature of industrialized countries’ commitments to reduce greenhouse gas emissions commitments under the Framework Convention on Climate Change. It should be noted, however, that the international climate change debate has been marked by the formation of multiple coalitions concerned with a wide range of issues. These included national commitments for developed and developing countries, financial assistance, technology transfer, and others (Bodansky, Daniel. 1993. *The United Nations Framework Convention on Climate Change: A Commentary. Yale Journal of International Law* 18: 451-547).

² The only definition agreed to by the international community appears in the Rio Declaration as Principle 15, which states that “In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.”

- The potential impacts of climate change outweigh the economic costs of mitigating this change;
- Action should be taken immediately to reduce the threat of climate change;
- Industrialized countries have the primary responsibility for reducing emissions; and
- These countries should reduce their domestic emissions rather than to try to offset these emissions by emissions reductions in other countries.

Table 6.1 lists the range of policy core beliefs of participants in the Precautionary Coalition. In general, statements by members of the precautionary coalitions would generally receive a score of around 4 or 5 (on a scale of 1 to 5) when coded using the coding framework, although they may express ambivalence with regard to a particular issue (i.e., their expressed belief on that issue was coded as a “3”).³

Policy core beliefs concerning climate change theory and models	
Validity of theory that anthropogenic GHG emissions are causing global warming.	5. Theory is completely valid/any warming is due to human activity 4. Theory is probably valid/any warming is most likely due to human activity 3. Theory is somewhat uncertain/cause of any warming is unclear
Precision of climate models	5. Models are highly accurate/very consistent with observational data 4. Models are generally accurate/mostly consistent with observational data. 3. Models are of uncertain accuracy/partially consistent with observational data
Clarity of current climate trends	5. The global climate is warming 4. The global climate appears to be warming 3. Current trends are unclear
Policy core beliefs concerning impacts of climate change and responses	
Threat posed by climate change	5. Climate change is presents a most significant threat 4. Climate change could present a significant threat 3. Risk is unclear
Economic costs of short-term responses	5. Near-term responses will be much less than impacts/could have economic benefits 4. Costs of short-term responses are likely to be less than costs of impacts 3. Costs of short-term responses are not clear/may be as high as costs of impacts
Policy core beliefs concerning nature of policy responses	
Basis for national policy responses	5. Strong policy responses must be taken immediately. 4. Moderate responses are justified now/strong measures should be phased in over time 3. Low cost/cost effective responses are justified now
Industrialized country responses/commitments before 2000.	5. Countries should reduce emissions 20% by 2005 (i.e., Toronto target) 4. Countries should stabilize emissions at 1990 levels by the year 2000 3. Countries should stabilize emissions, but no timetable should be adopted
Commitments after 2000	5. Countries must commit to reductions of 20% by 2005 (Toronto target) 4. Countries must commit to reductions with same target for all countries/minimal flexibility 3. Countries should commit to stabilization with differentiated targets and/or flexibility.
Mandated/ coordinated policy instruments	5. Impose full range of market-oriented and regulatory command-and control policies. 4. Adopt strong market-oriented policies, limited regulatory policies (e.g., tech. standards) 3. Adopt some market-oriented policies (i.e., taxes), encourage voluntary actions.
Policy core beliefs concerning scope and coordination of commitments	
Developing country vs. industrialized country commitments.	5. Industrialized countries alone must commit to reducing emissions. 4. Developing countries may commit to limiting/reducing emissions voluntarily. 3. Developing countries must commit to limiting growth in emissions.
Coordination or cooperation in national responses/ joint implementation	5. National responses may not be coordinated 4. National responses may only be coordinated among industrialized countries. 3. National responses may be coordinated among industrialized countries/other countries with limits.

³ As is discussed in the Appendix, participants whose average belief score across the spectrum of policy core issues was 3 were included in a coalition if they demonstrated sustained cooperative behavior with other members of that

6.1.2. The Precautionary Coalition in the International Climate Policy Subsystem

The principal members of the Precautionary Coalition participating in the International Climate Policy Subsystem were representatives of environment and science ministries, meteorological services, environmental and social advocacy organizations, international organizations such as UNEP and UNDP, and some policy and scientific research organizations. Representatives of foreign and other ministries from the European Union and the G-77 were also members of this coalition. Particularly vocal were individuals from vulnerable countries, such as small island nations, and historically “green” states, such as the Netherlands, Germany and Austria. Table 6.2 lists some of the members of the Precautionary Coalition and their belief scores for the periods 1988-1992 and 1992-1997, while Table 6.3 lists some of the major non-government organizations that participated in this coalition.⁴

It is important to point out here that the principle policy belief that many participants from developing countries shared with others in the Precautionary Coalition was that only industrialized countries should be required have binding obligations to reduce emissions. Participants from developing countries, particularly larger countries like India, China and Brazil argued that, for the sake of equity, emissions from developing countries should be allowed to grow until they reach the same per capita level as the emissions of developed countries, and that the right of their countries to develop must be preserved.⁵ While they could agree to reduce, or at least limit the growth of emissions, they would do so only on a contractual basis such that industrialized countries would pay for all incremental costs incurred.

The Precautionary Coalition had substantial resources as the political process commenced within the international climate policy subsystem. These resources included an understanding of the scientific complexities of the issue and a strong communications network through which they were able to set the agenda for many of the meetings and mobilize support at these meetings. They also acquired a certain amount of decision-making authority, as the heads of many delegations were Environment Ministers or members of these ministries, although their use of this authority was constrained by the consensual nature of the international policymaking process. In addition, the Coalition acquired significant public support during the 1988-1992 period as a result of preparations for the 1992 U.N. Conference on Environment and Development (UNCED) that were taking place during the same time period.

coalition.

⁴ The organizations included on this table are those that participated in three or more meetings of the IPCC, the INC, or the FCCC's COP. Although many more organizations participated in one or two meetings, they were not considered to be major coalition members because of the short duration of their involvement.

⁵ In a “non-paper” circulated at the first INC session, the delegation from India suggested “the problem of global warming is caused not by emissions of greenhouse gases as such but by excessive levels of per capita emissions of these gases. If per capita emissions of all countries had been on the same levels as that of the developing countries, the world would not today have faced the threat of global warming. It follows, therefore, that developed countries with high per capita emission levels are responsible for incremental global warming. In these negotiations, the principle of equity should be the touchstone for judging any proposal. Those responsible for environmental degradation should also be responsible for taking corrective measures. Since developed countries with high per capita emissions of greenhouse gases are responsible for incremental global warming, it follows that they have a corresponding obligation to take corrective action.” Quoted in Dasgupta, Chandrashekhar. 1994. *The Climate Change Negotiations*. In *Negotiating Climate Change: The Inside Story of the Rio Convention*, ed. Irving M. Mintzer and J. Amber Leonard. Cambridge: Cambridge University Press.

Table 6.2 International Precautionary Coalition Belief Scores

1988-1992						
Country Group	Organization description	Ave. Belief Score	Country Group	Organization description	Ave. Belief Score	
EU/Switzerland	Agriculture Ministry	4.2	AOSIS	Embassy	5.0	
	Alt.Energy/Technology Org.	4.3		Environment Ministry	4.5	
	Development/Social Change Org.	4.8		Foreign Affairs Ministry	4.6	
	Energy Ministry	5.0		Meteorological Service	4.6	
	Environment Ministry	3.9		Other OECD	Chief of State's Office	4.0
	Environmental Org.	4.3			Development/Social Change Org.	5.0
	Foreign Affairs Ministry	3.6			Economic Ministry	3.3
	General Policy Research Org.	4.0			Environment Ministry	3.6
	Meteorological Service	4.0			Environmental Org.	4.6
	Science Research Org.	4.3			Science/Research Ministry	3.0
	United Nations/Other International Org.	4.3			University	4.0
University	4.6					
G77	Development/Social Change Org.	5.0	United States		Environment Ministry	4.2
	Embassy	4.3			Environmental Org.	4.3
	Environment Ministry	4.5		Environmental Policy Research Org.	3.9	
	Environmental Org.	4.5		General Policy Research Org.	4.0	
	Environmental Policy Research Org.	4.0		Legislature	4.3	
	Foreign Affairs Ministry	3.6		Science Research Org.	4.6	
	Meteorological Service	3.8		Science/Research Ministry	3.9	
	Science/Research Ministry	3.7		University	4.5	
	University	4.0				

1992-1997					
Country Group	Organization description	Ave. Belief Score	Country Group	Organization description	Ave. Belief Score
EU/Switzerland	Agriculture Ministry	4.2	AOSIS	Embassy	4.8
	Alt.Energy/Technology Org.	4.3		Environment Ministry	4.6
	Development/Social Change Org.	4.8		Foreign Affairs Ministry	4.6
	Embassy	3.0		Meteorological Service	4.8
	Energy Ministry	5.0	G77	Development/Social Change Org.	5.0
	Environment Ministry	4.0		Embassy	3.5
	Environmental Org.	4.4		Energy Ministry	3.1
	Environmental Policy Research Org.	5.0		Environment Ministry	3.9
	Foreign Affairs Ministry	3.6		Environmental Org.	4.5
	General Policy Research Org.	4.0		Environmental Policy Research Org.	4.0
	Legislature	3.0		Foreign Affairs Ministry	3.6
	Science Research Org.	4.3		Legislature	5.0
	United Nations/Other International Org.	4.3		Meteorological Service	3.8
	University	3.2		Science/Research Ministry	3.7
United States	Environment Ministry	3.8	Other OECD	University	4.0
	Environmental Org.	4.3		Alt.Energy/Technology Org.	3.7
	Environmental Policy Research Org.	4.0		Development/Social Change Org.	5.0
	Foreign Affairs Ministry	3.4		Environment Ministry	3.8
	Legislature	3.3		Environmental Org.	4.6
	Science Research Org.	4.4		Fossil Fuels Industry Assoc.	3.4
	Science/Research Ministry	4.2		University	4.0
	University	4.5		Utility/Energy Distribution Industry Assoc.	3.1

Table 6.3 Major NGOs and IGOs in the International Precautionary Coalition

Environmental Organizations	Development/Social Change Organizations
Alliance To Save Energy	Asian-African Legal Consultative Committee
Caribbean Environmental Institute	Food and Agriculture Organization
Center for International Environmental Law	Habitat
Center for Our Common Future	International Council of Women
Citizens Alliance for Saving the Atmosphere and Earth	Thailand Development Research Institute
Climate Action Network	UNIDO
Environment and Energy Study Institute	UNITAR
Environmental Defense Fund	United Nations Commission on Technology and Development
Foundation for International Environmental Law and Development	United Nations Development Program
Friends of the Earth International	World Council of Churches
Germanwatch	World Health Organization
Global Commons Institute	
Greenpeace International	Environmental Policy Research Organizations
Indonesian Environmental Forum (Walhi)	Center for Clean Air Policy
International Council for Local Environmental Initiatives	Center for Global Change
International Council of Environmental Law	Center for International Climate and Energy Research
International Institute for Energy Conservation	Climate Institute
Kenya Energy and Environment Organizations	International Institute for Applied Systems Analysis (IIASA)
National Audubon Society	Stockholm Environment Institute
Natural Resources Defense Council	Tata Energy Research Institute
Sierra Club	Woods Hole Research Center
South Pacific Regional Environmental Program (SPREP)	Wuppertal Institute for Climate, Environment and Energy
Union of Concerned Scientists	United Nations/Other International Organizations
United Nations Environment Program	Economic Commission for Europe (ECE)
World Conservation Union	Global Environment Facility - World Bank
World Resources Institute	UN Economic and Social Council
World Wide Fund for Nature	World Bank
World Wildlife Fund	Science Research Organizations
Worldwatch Institute	Intergovernmental Oceanographic Commission
Alternative Energy/Technology Organizations	Intergovernmental Panel on Climate Change
New Energy and Industrial Technology Development Organization	International Council of Scientific Unions
Solar Electric Light Fund	UNSCO
	World Meteorological Organization

Many members of the Precautionary Coalition were able to develop a strong understanding of the scientific complexities of the climate change issue before the political debates began as well as a network through which to communicate and coordinate their activities. Though out the 1970's and 1980's, scientists in both government and academia worked together through such international mechanisms as the U.N. Environment Program (UNEP), the World Meteorological Organization (WMO), and the International Council of Scientific Unions (ICSU) to reach a consensus among themselves regarding the scientific basis of the issue. Particularly important were the creation of the World Climate Program by UNEP and the WMO in 1979 and a series of meeting sponsored by UNEP, WMO, and ICSU in 1986 and 1987 that produced the initial scientific assessments of climate change and set the agenda for the ensuing negotiations.⁶

In addition, many of these same scientists, as well as other policy makers, worked together in similar international environmental negotiations such as those for the Vienna Convention on the Protection of the Stratospheric Ozone Layer in 1985 and the Montreal Protocol on Substances that Deplete the Ozone Layer in 1987. Not only did the process through which these two agreements were negotiated help the coalition establish a strong network of individuals for communication and organization, but the agreements themselves provided the coalition with a

⁶ See Hecht, Alan D. and Dennis Tirpak. 1995. Framework Agreement on Climate Change: A Scientific and Policy History. *Climatic Change* 29, 4: 371 and Bodansky. 1993. The United Nations Framework Convention on Climate Change: A Commentary.

model on which to base a climate change treaty.⁷ This enabled them to set the agenda and terms of debate for the upcoming climate negotiations.⁸

These networks were enhanced when environmental groups from Europe and North America established a “Climate Action Network” in 1989 to disseminate information on climate change. NGOs from other regions joined in soon afterwards, and the CAN network became an important mechanism for fostering cooperation among environment and development groups from both the North and the South.⁹ Many individuals in these non-government organizations also had close ties to individuals from environment ministries, and worked closely with them during the negotiations. For example, representatives of the Natural Resources Defense Council and the World Wildlife Fund had worked on the climate change issue as officials of the U.S. Environmental Protection Agency, and maintained close ties with their former colleagues through the negotiations.¹⁰ Similarly, representatives from the Netherlands’ VROM worked informally with the Dutch environmental groups Milleudedefense and Greenpeace Netherlands during the final stages of the Kyoto Protocol negotiations to gain support for its position on such issues as targets and timetables.¹¹ Ties between environment ministries and environmental NGOs were particularly close among those countries forming the Alliance of Small Island States (AOSIS). In several instances, members of such organizations as the Center for International Environmental Law (CIEL) and the Foundation for International Environmental Law and Development (FIELD) comprised the bulk of the delegations from several of these countries.

The Precautionary Coalition was able to use these networks to marshal substantial participation by coalition members throughout the international policy process. As can be seen in Figure 6.2, members of the Precautionary Coalition, particularly environmental groups, environmental ministries, and science-oriented organizations comprised the majority all participants in the international policy process.

Environment ministers or other representatives of environment ministries also headed many of the delegations at the negotiating sessions, which provided the Precautionary Coalition with a substantial amount of decision-making authority. As was noted in Chapter 2, only the head of the delegation has the formal authority to represent the State in treaty negotiations. Figure 6.3 shows the percentage of various ministries heading delegations for the 1988-1992 and 1992-1997 period and the average and range of belief scores for individuals within these ministries.

⁷ See, e.g., Bodansky. 1993. The United Nations Framework Convention on Climate Change: A Commentary and Reinstein, Robert A. 1993. Climate Negotiations. *Washington Quarterly* 16, 1: 79-93.

⁸ Mathews. 1997. Power Shift.

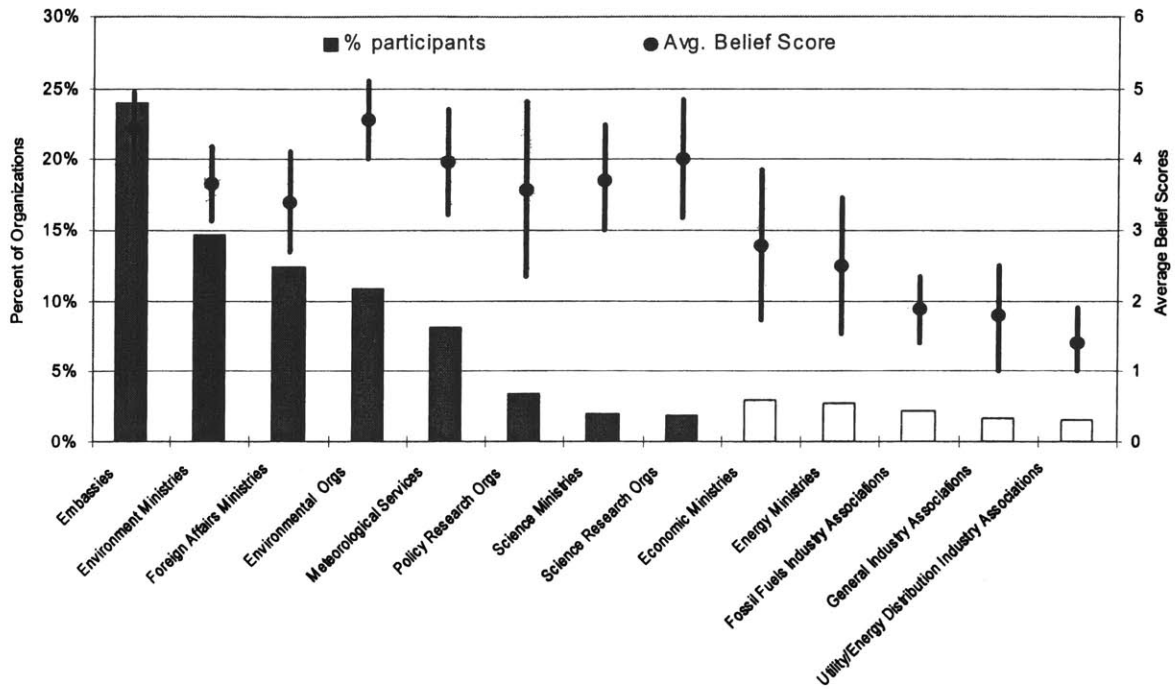
⁹ See, e.g., Rowlands. 1995. *The Politics of Global Atmospheric Change*; Rahman, Atiq and Annie Roncerel. 1994. A View From the Ground Up. In *Negotiating Climate Change: The Inside Story of the Rio Convention*, ed. Irving M. Mintzer and J. Amber Leonard. Cambridge: Cambridge University Press; Raustiala. 1997. States, NGOs, and international environmental institutions; and Mathews. 1991. *Preserving the Global Environment: The Challenge of Shared Leadership*.

¹⁰ Interview #18. Environmental Protection Agency, United States. Mar., 1998.

¹¹ Interview #39. Ministry of Housing, Spatial Planning and the Environment, Netherlands. Feb., 2002.

Figure 6.2 Participation Rates and Belief Scores in the International Climate Policy Subsystem

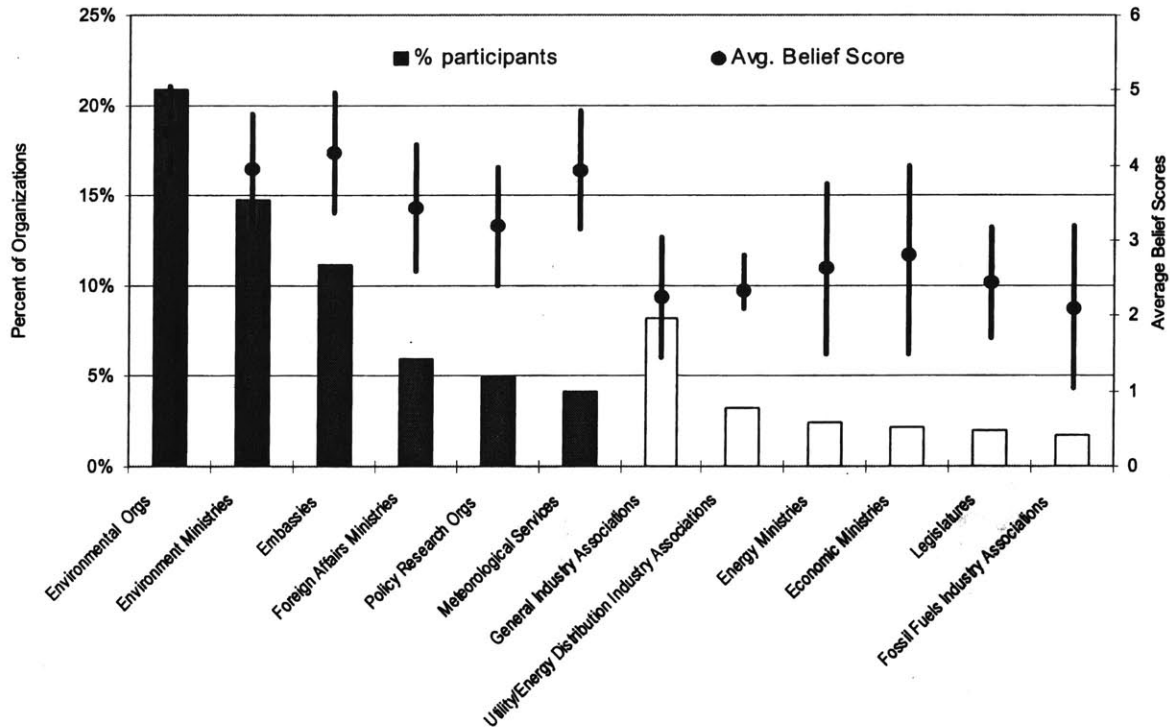
1988-1992



Precautionary Coalition

Economic Growth Coalition

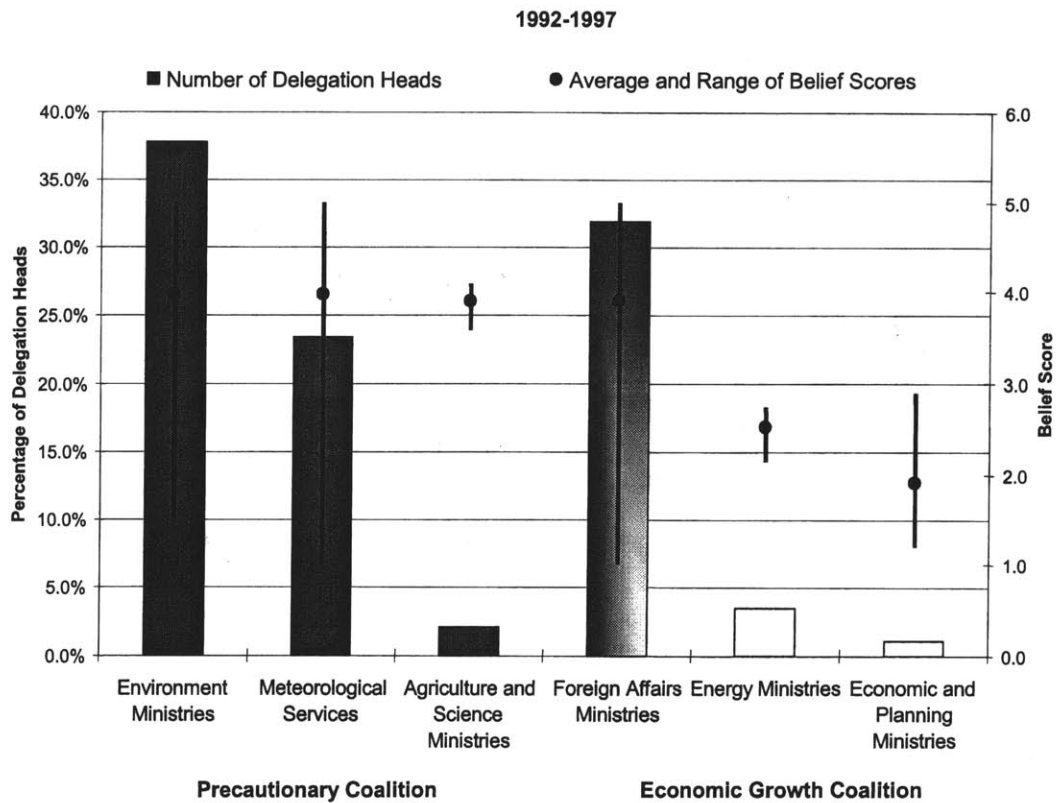
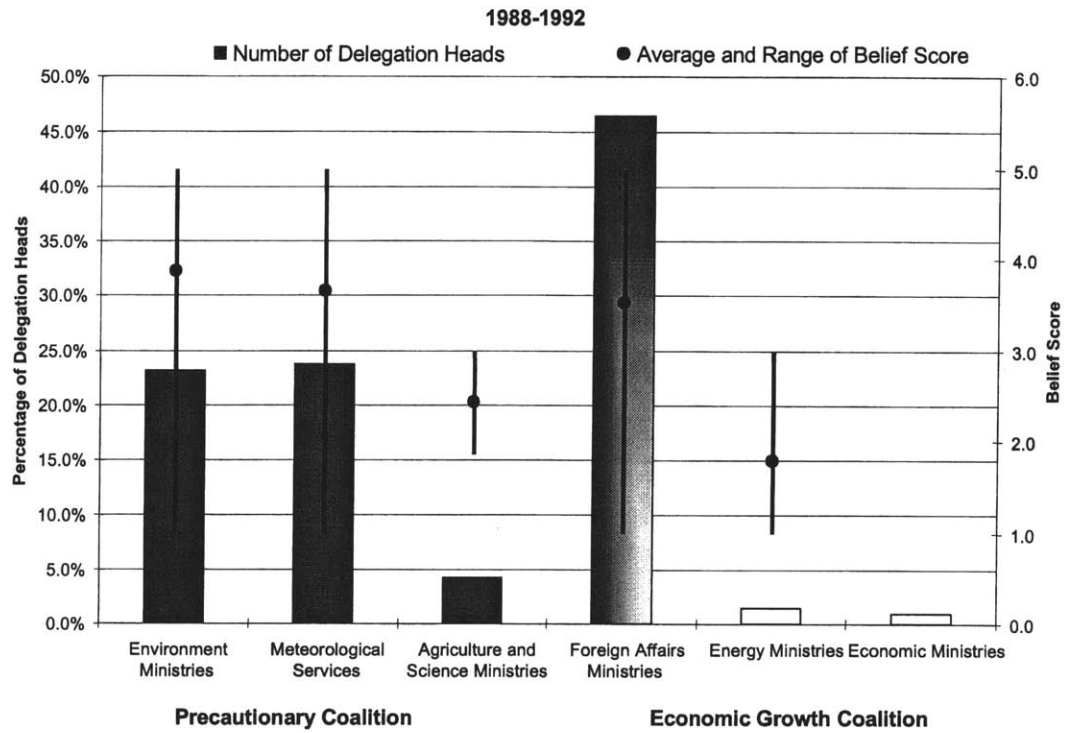
1992-1997



Precautionary Coalition

Economic Growth Coalition

Figure 6.3 Average Belief Scores for Organizations Heading Major Country Delegations



Members of the Precautionary Coalition were also able to use this authority to enhance coordination among them. For example, most of the preparations for the 1989 Noordwijk Conference, including the proposed text of the Noordwijk Declaration, were coordinated through environment ministries rather than through foreign ministries.¹² Similarly, many of the preparations for meetings of the IPCC were coordinated through science ministries, meteorological services, and environment ministries.¹³

In addition to these system-wide parameters, a number of events transpired during the 1980's that provided the precautionary coalition with substantial public support. Particularly important was the release in 1987 of the Brundtland Commission's Report "Our Common Future" and the preparations for the 1992 U.N. Conference on Environment and Development (UNCED). The Brundtland Commission report, commissioned by the United Nations and prepared by a highly-esteemed group of ministers, scientists, diplomats, and law-makers, engendered substantial public concern about the current state of the global environment and the need to conserve environmental resources for future generations.¹⁴ Soon after its publication, the U.N. General Assembly initiated planning for UNCED, which was to both commemorate the twentieth anniversary of the Stockholm Conference on the Human Environment and initiate a global effort to foster sustainable development.

The Precautionary Coalition was constrained in the use of these resources by the consensual nature of the international political process. As was discussed in Chapter 4, decision-making authority in the international policy process is shared among all nations involved in discussions about an issue instead of being vested in a central organization or institution. Because the majority of countries cannot simply over-rule the views of a minority, any final political outcome must accommodate these minority views if the countries holding the views are to consider themselves bound to the final agreement. Although members of the Precautionary Coalition greatly outnumbered those of the Economic Growth Coalition during the negotiating sessions and headed most of the delegations attending these sessions, they still needed to negotiate an agreement that could be accepted by all those participating in the discussions.

6.1.3. The Precautionary Coalition in the United States

The Precautionary Coalition in the U.S. climate change policy subsystem that was parallel to that of the international climate policy subsystem was comprised of many of the same individuals and organizations. Although the U.S. coalition enjoyed some of the same resources as its counterpart in the international subsystem, several features of the U.S. political system, as well as the nature climate change issue itself, presented it with significant constraints.

Between 1988 and 1992, the major actors in the U.S. Precautionary Coalition came from environmental organizations (e.g., GreenPeace, the Natural Resources Defense Council, the Environmental Defense Fund), the scientific community, and a few members of Congress, most

¹²Interview #53. Ministry of Housing, Spatial Planning and the Environment, Netherlands. Jan., 2005. See also Bodansky. 1993. *The United Nations Framework Convention on Climate Change: A Commentary*.

¹³ The WMO, one of the parent bodies of the IPCC, actually requires that national representatives to it be officials of national meteorological organizations, and communicates to national governments through that representative.

¹⁴ See, e.g., Mintzer, Irving M. and J. Amber Leonard, eds. 1994. *Negotiating Climate Change: The Inside Story of the Rio Convention*. Cambridge: Cambridge University Press.

notably the Democratic Senators Timothy Wirth and Al Gore. Individuals from federal scientific agencies concerned with climate change (e.g., NASA, NSF and NOAA) and the Environmental Protection Agency (EPA) also participated in the coalition, such as EPA Administration William Reilly, and Eileen Claussen (EPA's Assistant Administer for Air and Radiation). Some representatives of the U.S. State Department, such as Fred Bernthal (Assistant Secretary of State for Oceans, Environmental and Scientific Affairs) and William Nitze (Deputy Assistant Secretary of State for Environment) were also members of this coalition at the onset of the policy process, although they were removed from their positions in 1989 by the White House. Table 6.4 lists the major organizations participating in the precautionary coalition during this period, while Table 6.5 shows the coalition's average belief scores.

Table 6.4 Organizations participating in the U.S. Precautionary Coalition	
	1988-1992
Government Agencies	Environmental Organizations
Environmental Protection Agency	American Council for an Energy Efficient Economy
Council on Environmental Quality	International Institute for Energy Conservation
National Aeronautics and Space Administration	Wilderness Society
National Oceanic and Atmospheric Administration	Environmental Defense Fund
Legislature	World Wildlife Fund
Senate	Friends of the Earth International
House of Representatives	National Audubon Society
Science Research Org.	Alliance To Save Energy
National Center for Atmospheric Research	Center for International Environmental Law
Utility/Energy Distribution Company	Natural Resources Defense Council
Southern California Edison	World Resources Institute
Pacific Gas and Electric	Union of Concerned Scientists
	Sierra Club
	Climate Action Network
	Greenpeace International
	Environmental Law Institute
	Center for Global Change
	1992-1997
Environmental Organizations	General Policy Research Organizations
American Council for an Energy Efficient Economy	Council on Foreign Relations
International Institute for Energy Conservation	Office of Technology Assessment
Sierra Club	Government
Union of Concerned Scientists	Office of the President
World Wildlife Fund	Office of the Vice President
Natural Resources Defense Council	Office of Science and Technology Policy
U.S. Public Interest Research Group	Environmental Protection Agency
Climate Action Network	Department of State
Environment and Energy Study Institute	Department of Energy
World Resources Institute	Department of Commerce
Alliance To Save Energy	Insurance Industry Associations
Conservation Law Foundation	Insurance Institute for Property Loss Reduction
Environmental Defense Fund	Local/Regional Government Associations
Environmental Policy Research Organizations	National Association of State Energy Officials
Rocky Mountain Institute	Science Research Organizations
Woods Hole Research Center	National Center for Atmospheric Research
Fossil Fuels Companies	National Academy of Engineering
ENRON Corporation	Utility/Energy Distribution Companies
General Industry Associations	Montreaux Energy Corporation
Business Council for A Sustainable Energy Future	New England Electric Systems

Table 6.5 U.S. Precautionary Coalition Belief Scores

1988-1992		1988-1992	
Organization	Belief Score	Organization	Belief Score
Environmental Organizations		Government	
American Council for an Energy Efficient Economy	5.0	Environmental Protection Agency	3.4
International Institute for Energy Conservation	5.0	Council on Environmental Quality	3.0
Wilderness Society	4.8	National Oceanic and Atmospheric Administration	3.0
Environmental Defense Fund	4.8		
World Wildlife Fund	4.7	Legislature	
Friends of the Earth International	4.7	Senate	3.9
National Audubon Society	4.7	House of Representatives	3.3
Alliance To Save Energy	4.7	Science Research Org.	
Center for International Environmental Law	4.7	National Center for Atmospheric Research	4.4
Natural Resources Defense Council	4.6	Utility/Energy Distribution Company	
World Resources Institute	4.6	Southern California Edison	4.0
Union of Concerned Scientists	4.5	Pacific Gas and Electric	3.7
Sierra Club	4.4		
Climate Action Network	4.2		
Greenpeace International	3.7		
Environmental Law Institute	3.3		
Center for Global Change	4.1		
1992-1997		1992-1997	
Environmental Organizations		General Policy Research Organizations	
American Council for an Energy Efficient Economy	5.0	Council on Foreign Relations	4.8
International Council for Local Environmental Initiatives	5.0	Office of Technology Assessment	3.7
International Institute for Energy Conservation	5.0	Government	
Sierra Club	5.0	Office of the President	4.6
Union of Concerned Scientists	5.0	Office of the Vice President	4.3
World Wildlife Fund	5.0	Office of Science and Technology Policy	4.0
Natural Resources Defense Council	4.9	Environmental Protection Agency	3.7
U.S. Public Interest Research Group	4.7	Department of State	3.5
Climate Action Network	4.5	Department of Energy	3.3
Environment and Energy Study Institute	4.5	Department of Commerce	3.0
World Resources Institute	4.2	Insurance Industry Associations	
Alliance To Save Energy	4.0	Insurance Institute for Property Loss Reduction	3.0
Conservation Law Foundation	4.0	Science Research Organizations	
Environmental Defense Fund	3.8	National Center for Atmospheric Research	4.3
Environmental Policy Research Organizations		National Academy of Engineering	4.0
Rocky Mountain Institute	5.0	Utility/Energy Distribution Companies	
Woods Hole Research Center	3.4	Montreal Energy Corporation	4.0
General Industry Associations		New England Electric Systems	4.0
Business Council for A Sustainable Energy Future	3.0	Fossil Fuels Companies	
Local/Regional Government Associations		British Petroleum	4.3
National Association of State Energy Officials	3.0	ENRON Corporation	4.0

As was noted above, many members of the precautionary coalition in the United States also participated in the parallel international precautionary coalition as both as delegates and observers at IPCC, INC, and COP meetings. Table 6.6 lists some of the organizations whose members were active in both processes during the 1988-1992 and 1992-1997 periods.

Like its international counterpart, a major strength of the precautionary coalition in the United States as the policy process began was its organization and understanding of the issue. Environmental groups such as NRDC, EDF and the Sierra Club started to work together on the issue as early as 1987, and were among the principal organizers of the Climate Action Network

(CAN). The coalition also benefited from the substantial overlap with the international precautionary coalition. Because many of the important environmental groups and government agencies participated in both the U.S. and international policy processes, they had a strong understanding of the complexities of the issue, and were in a position to use developments in the international subsystem to advance the issue in the U.S. subsystem.

Table 6.6 Organizations participating in both the U.S. and International Precautionary Coalitions	
	1988-1992
Alliance To Save Energy	National Audubon Society
Center for Global Change	National Oceanic and Atmospheric Administration
Center for International Environmental Law	Natural Resources Defense Council
Council on Environmental Quality	Sierra Club
Environmental Defense Fund	Union of Concerned Scientists
Environmental Protection Agency	World Resources Institute
Greenpeace International	World Wildlife Fund
National Aeronautics and Space Administration	
	1992-1997
Alliance To Save Energy	Natural Resources Defense Council
Business Council for A Sustainable Energy Future	Office of Science and Technology Policy
Department of Commerce	Office of the President
Department of Energy	Office of the Vice President
Department of State	Sierra Club
Environment and Energy Study Institute	Union of Concerned Scientists
Environmental Defense Fund	World Resources Institute
Environmental Protection Agency	World Wildlife Fund
International Institute for Energy Conservation	

The ability of the U.S. precautionary coalition to take advantage of these resources was constrained by a number of political and institutional features of the U.S. policy process. One such constraint is the relatively low status of the various environmental and scientific agencies within the government. The Environmental Protection Agency is an independent agency, while the National Oceanic and Atmospheric Administration is part of the Department of Commerce. Although the Council on Environmental Quality is part of the Office of the White House, it does not have the same stature as other White House advisory councils, such as the Council of Economic Advisors.

In addition, responsibility within the executive branch for various aspects of environmental policy is fragmented, with no one agency having full responsibility for all aspects of the climate change issue. The Department of Energy coordinates and administers the energy functions of the Federal Government, while the Environmental Protection Agency has responsibility for environmental matters. Other aspects of energy and environmental policy issues are handled by the Department of the Interior (licensing), the Department of Agriculture, and the Department of Commerce (coal and trade issues), while the Department of State has responsibility for most international environmental issues. Scientific issues related to climate change are also handled by NOAA, NASA, the National Science Foundation (NSF), and the U.S. Geological Survey (USGS). Finally, state governments have the authority to legislate their own energy policies and

programs independent of the federal government, particularly in the area of setting electricity and gas rates and service standards.¹⁵

Finally, the ability of members of Congress who were active in the U.S. precautionary coalition to participate in the international policy process prior to 1992 was limited by the Constitutional mandate that only the President has the authority to carry out U.S. foreign policy. They were able to influence to some degree the foreign policy decisions of the Executive Branch during this period through their oversight and budgetary roles. However, they were unable to engage in the international debate as official representatives of the U.S. government until after the 1992 elections.

With the election in 1992 of President Bill Clinton and Vice-President Al Gore, a number of individuals from environmental advocacy groups were appointed to high-level positions within the new administration, as were a few members of Congress and lower-ranking representatives of EPA and other agencies. This enabled them to engage more fully in the international debate. In addition, the coalition attracted the participation of several private sector companies and associations, such as ENRON and the Business Council for A Sustainable Energy Future.

6.1.4. The Precautionary Coalition in the Netherlands

Virtually all of the members of international precautionary coalition from the Netherlands were members of the Netherlands precautionary coalition as well. This coalition had substantial resources with which to pursue their policy objectives due to a number of systemic factors, including the structure of the administrative bureaucracy within the Netherlands, the nature of the relationships between the government and industry, and geographic features of the Netherlands.

The precautionary coalition in the Netherlands was comprised primarily of the Environment Ministry, government environmental research organizations such as RIVM, environmental groups, and several political parties. Participation in the coalition was relatively stable throughout the period between 1988 and 1997, although a few more environmental groups and research organizations became active after 1992. Table 6.7 lists the organizations participating in this coalition during the 1988-1992 and 1992-1997 period. Table 6.8 indicates the belief scores for most of these organizations.

A number of factors provided the precautionary coalition with substantial resources with which to pursue their policy objectives at the onset of the climate change debate, including financial and technical resources, public support, and several fortuitous system-wide events. The principal actor in the Dutch precautionary coalition has been the Ministry of Housing, Spatial Planning and Environment (*Ministerie van Volkshuisvesting, Ruimtelijke Ordening en Milieubeheer – VROM*). Because VROM is responsible for physical planning as well as the development and implementation of environmental policy, it has enjoyed substantially more influence within the government than most environmental ministries.¹⁶ VROM had considerably

¹⁵ Vernon, Raymond. 1993. Behind The Scenes: How Policymaking In The European Community, Japan, And The United States Affects Global Negotiations. *Environment* 35, 5: 12 outlines how the U.S. political structure and its separation of powers makes coordinating national policies with international positions difficult. See also Nitze, William A. 1991. Improving U.S. Interagency Coordination of International Environmental Policy Development. *Environment* 33, 4.

¹⁶ Notably, the Netherlands was one of the first European countries to raise the environment agency to the Ministerial

more personnel working on the issue than any of the other Ministries, which allowed it to set the agenda for the policy debate within the Dutch climate change policy process.¹⁷ The heads of VROM's climate unit, Pier Vellinga (1988-1992) and Bert Metz (1992-1997), were particularly influential.¹⁸ In addition, NEPP planning process that gave rise to NEPP-II had been established in the mid-1980's and had gone through several planning cycles, the legitimacy of both the process itself and VROM's leadership of it was well-established.¹⁹

Table 6.7 Organizations participating in the Dutch Precautionary Coalition	
1988-1992	
Government Agencies	Environmental Organizations
Ministry of Housing, Spatial Planning and the Environment (VROM)	Milleudedefense/Friends of the Earth International
National Institute of Public Health and Environmental Protection (RIVM)	Stichting Natuur en Millieu
Ministry of Foreign Affairs	Greenpeace Netherlands
Legislature	
D66	
Christian Democrat Party	
Labor Party (PvdA)	
1992-1997	
Government Agencies	Environmental Organizations
Ministry of Housing, Spatial Planning and the Environment (VROM)	Climate Action Network
National Institute of Public Health and Environmental Protection (RIVM)	World Wide Fund for Nature
Ministry of Foreign Affairs	Milleudedefense/Friends of the Earth International
Netherlands Energy Research Foundation (ECN)	Netherlands Committee for IUCN
Legislature	Stichting Natuur en Millieu
D66	Greenpeace Netherlands
Christian Democrat Party	
Labor Party (PvdA)	

Several institutional factors also strengthened the hand of the precautionary coalition. The Netherlands' parliamentary system of government provided some assurance of an initial base of legislative support for the plan, and its involvement in the European Union established legitimacy for the international decision-making process.²⁰ In addition, VROM was able to limit

level. See Pettenger, Mary. 2002. Consensus Policymaking and the Dutch Environmental Model.

¹⁷ Interview #50. Ministry of Foreign Affairs, Netherlands. Feb., 1908 VROM's Climate Change section was staffed by over two dozen people by the end of 1997, while the Ministry of Foreign Affairs (BuZa). had only two people and the Ministry of Economic Affairs had only one person working on the issue full time (Interview #46. Ministry of Housing, Spatial Planning and the Environment, Netherlands. Feb., 1908).

¹⁸ Vellinga was formerly a deputy director of the Delft Hydraulics Laboratory.

¹⁹ Bennett points out that two factors contributed to strengthening the credibility of the NEPP. First, in the late 1980s, there was a substantial increase in public concern over environmental degradation, and opinion polls in the Netherlands consistently showed that the public considered environmental protection to be the single most important issue. Second, a report *Concern for Tomorrow* was released in 1988 that provided an inventory of the most serious environmental problems confronting the Netherlands. This report, which had substantial scientific credibility, provided hard evidence the government's non-environmental departments that painful and expensive measures would be required to meet the goals of the NEPP (Bennett, Graham. 1991. The History of the Dutch National Environmental Policy Plan. *Environment* 33, 7: 7-33).

²⁰ For a discussion of the role of the EU in national decision-making, see, e.g., Eising, R. 2004. Multilevel governance and business interests in the European Union. *Governance-an International Journal of Policy and Administration* 17, 2: 211-245; Jordan, A. J. 2003. The Europeanization of national government and policy: A departmental perspective. *British Journal of Political Science* 33: 261-282; Kellow, A. and A. R. Zito. 2002.

to some extent the participation of non-government organizations in the planning process. While most of the major interest groups sat on Advisory Boards to the NEPP process, these met infrequently. In lieu of regular Board meetings, informal meetings between VROM and these various interests were held on an irregular basis, and generally at the request of VROM. This limited the degree to which NGO members of the Economic Growth Coalition could influence the nature and the substance of the planning process. In addition, the precautionary coalition benefited from close ties with the media, which tends to be more supportive of government than the media in United States.²¹

Table 6.8 Belief Scores for Participants in the Dutch Precautionary Coalition

Organization	Average Belief Score
Government Agencies	
Ministry of Housing, Spatial Planning and the Environment (VROM)	4.1
National Institute of Public Health and Environmental Protection (RIVM)	4.1
Ministry of Foreign Affairs	3.7
Netherlands Energy Research Foundation (ECN)	4.0
Environmental Organizations	
Climate Action Network	4.9
World Wide Fund for Nature	4.9
Milleudefense/Friends of the Earth International	4.7
Netherlands Committee for IUCN	4.3
Stichting Natuur en Millieu	5.0
Greenpeace Netherlands	5.0
Legislature	
D66	4.5
Christian Democrat Party	4.4
Labor Party (PvdA)	4.1

The Dutch precautionary coalition also enjoyed strong public support.²² The Dutch have always viewed themselves as being particularly vulnerable to pollution, and the release of the Brundtland Report in 1987, followed in 1989 by the publication by RIVM of a report entitled Concern for Tomorrow that suggested that the Netherlands faced a broad range of environmental

Steering through complexity: EU environmental regulation in the international context. *Political Studies* 50, 1: 43-60; Montpetit, E. 2000. Europeanization and domestic politics: Europe and the development of a French environmental policy for the agricultural sector. *Journal of European Public Policy* 7, 4: 576-592; Sbragia, A. M. 1999. The changing role of the European Union in international environmental politics: institution building and the politics of climate change. *Environment and Planning C-Government and Policy* 17, 1: 53-68; Cameron, David R. 1995. Transnational Relations and the Development of European Economic and Monetary Union. In *Transnational Relations Back In: Non-State Actors, Domestic Structures and International Institutions*, ed. Thomas Risse-Kappen, pg. 37. New York: Cambridge University Press; and Vernon. 1993. Behind The Scenes: How Policymaking In The European Community, Japan, And The United States Affects Global Negotiations.

²¹ Bovens suggests that MPs will often ask a journalist to write on a particular issue so that questions regarding it can be raised in parliament. A triangle often exists between civil servants, members of parliament, and the media. A civil servant will leak information to the MP, who then leaks it to a journalist. The journalist publishes an article about it in the newspaper, after which the MP raises questions about in Parliament. The answers to these questions may even be prepared by the individual who leaked the information in the first place. (Bovens, Geveke, and de Vries. 1995. Open public administration in the Netherlands: The politics of leaking)

²² Opinion polls conducted in 1989 indicated that 70 percent of the population stated that they would be willing to forgo any increase in their living standards for up to five years if that is the price of a cleaner country. (Green Politics Can Hurt. *Financial Times*, May 4, 1989. 1 pg. 26).

problems, generated substantial public support for stronger environmental policies.²³ The impacts of climate change are of particular concern, as the country is particularly vulnerable to severe flooding as a result of rising sea levels.²⁴ VROM was able to use this base of support to mount a vigorous public awareness campaign, that attracting additional public support for action to address climate change.²⁵

Environmental advocacy groups have also been strong in the Netherlands, with substantial and widespread membership.²⁶ These groups have played an important role in educating the public and putting issues on the political agenda.²⁷ They have also had close relationship with VROM, which provides them with substantial financial support, and contributed to a number of the proposals put forward by the Dutch government during the international negotiations.²⁸ While it is one of the most vulnerable of the OECD nations to the impacts of sea level rise,

Despite this strong support for environmental issues, the Dutch precautionary coalition was constrained in general by the high priority that Dutch society puts on economic development and international competitiveness. The Netherlands is densely populated, and its strategic location on the North Sea has enabled it to become highly industrialized. Although its economy is less dependant on coal and oil than other OECD countries, much of its emissions come from sectors such as transportation that are difficult to control.²⁹ In addition, Dutch society is highly “pillarized,” with the various subcultures within the country having very little contact with each other.³⁰ Lijphart has described the Dutch political system as rooted an “organized social

²³ Bennett. 1991. The History of the Dutch National Environmental Policy Plan.

²⁴ Some studies have suggested that raising the country’s protective dikes could cost over \$75 million per year by 2010 (Raun, Laura. Flood Tide of Environmental Concern Engulfs The Dutch. *Financial Times*, Feb. 16, 1989. I pg. 2).

²⁵ According to VROM, this public awareness campaign succeeded in raising awareness of the causes and effects of climate change in 34 percent of the population, and in 1992, 38 percent of the population felt highly involved in the climate change issue, up from 33 percent in 1990 (Netherlands. 1994. *Netherlands' National Communication on Climate Change Policies*. Ministry of Housing, Spatial Planning and Environment, Air and Energy Directorate, Climate Change Division).

²⁶ Cramer, Jacqueline. 1989. The rise and fall of new knowledge interest in the Dutch environmental movement. *Environmentalist* 9, 2: 101-120, Kijkink, Gertjan and Herman van der Westen. 1992. Green politics in Europe: the issues and the voters. *Political Geography* 11, 1: 7-11.

²⁷ Cramer. 1989. The rise and fall of new knowledge interest in the Dutch environmental movement.

²⁸ Interview #41. Ministry of Foreign Affairs, Netherlands. Feb., 2002; Interview #50. Ministry of Foreign Affairs, Netherlands. Feb., 1908; Interview #47. Ministry of Housing, Spatial Planning and the Environment, Netherlands. Feb., 1908. In 1996, VROM paid \$4.5 million to subsidize the operating costs of about 30 environmental NGOs (Interview #45. Mileau Defens, Netherlands. Feb., 1908). See also van Harmelen, A. K, M. J. Boomsma, and R. H. J. Korenromp. 2000. *Building Bridges, Building Dikes: an Evaluation of the Dutch Policy-Making on Climate Change*. Dutch National Research Programme on Global Air Pollution and Climate Change.

²⁹ Almost 50 percent of fuel used in the Netherlands in 1992 was natural gas. Transportation contributed 20 percent of the total energy-related CO₂ emissions, whereas electricity generation was responsible for only 27 percent of emissions, below the OECD average of 34 percent. Industry was responsible for 24 percent of CO₂ emissions (OECD. 1993. *OECD Environmental Performance Reviews: Netherlands*. Paris: Organisation for Economic Cooperation and Development; OECD/IEA. 1994. *Climate Change Policy Initiatives: 1994 Update*. Paris: Organization for Economic Cooperation and Development).

³⁰ Dutch society has traditionally been divided into four “pillars”: Catholics, Protestants, Socialists, and Liberals. Until recently, individuals within Dutch society tended to identify themselves by these pillars and had very little contact with members of other pillars (Tash, Robert. 2004. *Dutch Pluralism: a Model in Tolerance for Developing*

heterogeneity” in which only the elites of each social group interact to make policy.³¹ As a result, the vast majority of the Dutch have very little input into policy decision-making.

6.1.5. The Precautionary Coalition in Japan

The composition of the precautionary coalition in Japan was similar to that of the other subsystems.³² However, it had far fewer active participants. Prior to 1989, it consisted primarily of three government agencies (the Environment Agency, the Meteorological Agency, and the Science and Technology Agency) and one environmental group (Greenpeace International). However, it also had the support of the Keiseikai, the dominant faction within the ruling Liberal Democratic Party (LDP).³³ Significant LDP participation in the coalition faded in 1993, however, after leading members of the Keiseikai became embroiled in a financial scandal and the LDP lost its 38-year hold on power. A few more environmental groups became involved in the coalition in the early 1990's. The number of active NGOs increased once again after Kyoto was designated as the site for COP 3.³⁴ Several alternative energy companies also joined the coalition at that point, as did the New Energy and Industrial Technology Development Organization (a semi-governmental alternative energy research organization supported by the Ministry of International Trade and Industry).³⁵ Table 6.8 lists the major organizations participating in the Japanese precautionary coalition during the 1988-1992 and 1992-1997 periods.

The precautionary coalition in Japan had few resources and substantial constraints at the onset of the climate change policy debate. As in other countries, the Environment Agency was a young agency, and was quite weak in comparison with the Ministry of International Trade and Industry (MITI) and other ministries.³⁶ It was also caught up in dealing with a number of domestic pollution problems during the late 1980's, and was unable to devote much attention to global issues at the time that climate change was emerging as a major issue.³⁷

Democracies. New York: Peter Lang Publishing Co.; van Putten, Jan. 1982. *Policy Styles in the Netherlands: Negotiation and Conflict*. In *Policy Styles in Western Europe*, ed. Jeremy Richardson. London: George Allen & Unwin).

³¹ Lijphart, Arend. 2004. *Democracies: Patterns of Majoritarian and Consensus Government in Twenty-One Countries*. New Haven: Yale University Press.

³² The composition of the precautionary and economic growth coalitions was determined through a qualitative analysis of those public documents available in English. Resources were not available to undertake a quantitative documents analysis similar to those undertaken in the United States and the Netherlands.

³³ This interest is ironic, as the Japanese policy-making system has traditionally been viewed as being dominated by the “iron triangle” of the professional bureaucracy, the conservative LDP, and major business interests. See e.g., Johnson, A. K. 1998. The influence of institutional culture on the formation of pre-regime climate change policies in Sweden, Japan and the United States. *Environmental Values* 7, 2: 223-244.

³⁴ Interview #27. Friends of the Earth International, Japan. Feb., 1998.

³⁵ Although many Japanese NGOs registered were registered as observers at COP 3, which was held in Kyoto, Japan, most of these groups were formed simply to provide their members with a means for gaining access to the meeting (Interview #3. World Resources Institute, Japan. Nov., 1998). Only those groups listed in Table 6.9 were engaged in the policy debate internationally and within Japan for a number of years prior to COP 3.

³⁶ Interview #22. Environment Agency, Japan. Feb., 2004; Johnson. 1998. The influence of institutional culture on the formation of pre-regime climate change policies in Sweden, Japan and the United States; Schreurs, Miranda. 2002. *Environmental Politics in Japan, Germany, and the United States*. Cambridge: Cambridge University Press.

³⁷ Johnson. 1998. The influence of institutional culture on the formation of pre-regime climate change policies in

Table 6.9 Organizations participating in the Japanese Precautionary Coalition

1988-1992	
<p>Government Agencies Environment Agency Meteorological Agency Ministry of Transportation Ministry of Agriculture, Forestry and Fisheries Ministry of Foreign Affairs</p>	<p>Legislature Diet Environment Alliance Liberal Democratic Party (LDP)/Keiseikai</p> <p>Environmental Organizations Citizens Alliance for Saving the Atmosphere and Earth Greenpeace International</p>
1992-1997	
<p>Government Agencies Environment Agency Meteorological Agency Ministry of Foreign Affairs Ministry of Transportation Ministry of Agriculture, Forestry and Fisheries</p> <p>Alternative Energy/Technology Organizations New Energy and Industrial Technology Development Organization</p>	<p>Environmental Organizations Citizens Alliance for Saving the Atmosphere and Earth Friends of the Earth International Global Environment Forum-Kansai Greenpeace International Kiko Forum '97 Peoples' Forum 2001, Japan</p> <p>World Wide Fund for Nature</p>

Environmental advocacy groups in Japan were also very weak at the onset of the climate change policy process. Most Japanese environmental NGOs were very local in organization and membership, and tended to focus on local anti-pollution and victim compensation issues.³⁸ Cultural norms discouraged challenges to authority, and Japan's closed policy-making system made the use of the legal system to challenge public policy difficult. In addition, significant legal and fiscal barriers impeded the efforts of national-level advocacy groups to incorporate, raise money, and solicit memberships.³⁹ As a result, few environmental groups were actively engaged in the climate change issue in the late 1980s.

This situation changed dramatically during the 1990s, due in part to the advent of the Internet. Supported by international environmental NGOs such as Greenpeace, Friends of the Earth International, and the World Resources Institute, environmental activists in Japan came together in early 1992 to form the People's Forum for the UNCED, an umbrella organization intended to provide the Japanese environmental movement with a united voice at UNCED.⁴⁰ The

Sweden, Japan and the United States.

³⁸Broadbent, Jeffrey. 1998. *Environmental Politics in Japan, Networks of Power and Protest*. Cambridge: Cambridge University Press; Reimann, Kim D and Forrest, Richard 2002 *Connecting Global and Local Societal Activism: International Politics, NGOs and the Environmental Movement of Japan*.

³⁹ Interview #27. Friends of the Earth International, Japan. Feb., 2004. For example, until it was amended in 1998, Japan's Non-Profit Organization Law required NGOs to receive approval from the local or national government offices with jurisdiction over the relevant issue area in order to obtain non-profit status. This factor alone was cited as a major disincentive for establishing indigenous NGOs. During the late 1980s and early 1990s, both Greenpeace Japan and FOE Japan received virtually all of their funding from their international parent organizations, and operated without receiving non-profit status (Interview #26. Greenpeace International, Japan. Feb., 2004). See also Pekkanen, Robert. 2000. Japan's New Politics: The Case of the NPO Law. *Journal of Japanese Studies* 26, 1: 613-644; Broadbent. 1998. *Environmental Politics in Japan, Networks of Power and Protest*; Johnson. 1998. The influence of institutional culture on the formation of pre-regime climate change policies in Sweden, Japan and the United States; and Schreurs. 2002. *Environmental Politics in Japan, Germany, and the United States*.

⁴⁰ Interview #33. United Nations University, Japan. Jan., 1998.

People's Forum came to represent a wide range of activist groups, including consumer groups, rainforest activists, public interest lawyers, Minamata victims, and climate scientists. It regrouped in November 1993 as People's Forum 2001 with the goal of influencing government policy on environment and development issues.

Using this same model, a group of approximately 70 environmental and citizen's groups came together in December 1996 to form Kiko Forum '97 (the Citizens' Forum for Preventing Climate Change/Global Warming).⁴¹ A primary goal of this group was to influence the shape of the protocol to be adopted at COP 3 in Kyoto. During the period preceding the Kyoto conference, the group worked to educate the public on climate change, raise funds, and provide logistical support for environmental NGOs attending the conference. These activities were greatly facilitated by the rapid development of the Internet, which provided an inexpensive means for these groups to communicate with each other and coordinate their activities.⁴² As a result of these efforts, a network of over 225 Japanese environmental NGOs, agricultural cooperatives, youth groups, and local living cooperatives attended the Kyoto conference.⁴³

Japan's historical concern about its role in the world and need to find ways to "internationalize" was an important resource for the Japanese precautionary coalition.⁴⁴ During the late 1980s, the publication of the Brundtland Commission report and the emergence of "sustainable development" as an international environmental norm coincided with Japan's rise as a global economic superpower. It was a principal proponent of the Brundtland Commission and UNCED, and government leaders were under pressure to ensure that its domestic environmental policies lived up to international standards.⁴⁵

The precautionary coalition was also bolstered when Prime Minister Takeshita began in 1989 to take a personal interest in the issue. As a result of his interest and influence, other members of the Keiseikai, the dominant faction within the ruling Liberal Democratic Party (LDP,) began to support aggressive action to mitigate climate change.⁴⁶ This influence waned in 1993, however, after many LDP members lost their seats in national elections and the LDP lost control of the government.

⁴¹ The formation of this group was inspired in part by the success of Klimaforum '95, a German NGO umbrella group active at COP 1.

⁴² Interview #27. Friends of the Earth International, Japan. Feb., 1998.

⁴³ Schreurs. 2002. *Environmental Politics in Japan, Germany, and the United States*.

⁴⁴ Gurowitz, Amy. 1999. Mobilizing International Norms: Domestic actors, immigrants and the Japanese State. *World Politics* 51, 3: 413-435.

⁴⁵ Reimann, Kim D and Forrest, Richard 2002 Connecting Global and Local Societal Activism: International Politics, NGOs and the Environmental Movement of Japan.

⁴⁶ Schreurs, Miranda. 2003. Divergent paths: Environmental policy in Germany, the United States, and Japan. *Environment* 45, 8: 8-17 This interest is ironic, as the Japanese policy-making system has traditionally been viewed as being dominated by the "iron triangle" of the professional bureaucracy, the conservative LDP, and major business interests. See also Johnson. 1998. The influence of institutional culture on the formation of pre-regime climate change policies in Sweden, Japan and the United States.

6.2 THE ECONOMIC GROWTH COALITIONS

The “Economic Growth” coalition is comprised of those individuals and organizations that are skeptical about the threat of climate change and are resistant to actions to address it that might impede economic activity. They generally hold the fundamental normative belief that unfettered economic growth is the best way to ensure the security for future generations.⁴⁷

6.2.1. Beliefs of the Economic Growth Coalition

The policy core beliefs of the Economic Growth Coalition can be summarized as follows:

- The threat of climate change is unclear, as the science of climate change is surrounded by many uncertainties;
- The potential economic costs of strong measures to mitigate this change are substantial, and are difficult to justify given the scientific uncertainties;
- Costly actions to mitigate climate change should not be undertaken until some of the scientific uncertainties are resolved.
- If actions to reduce are taken, all countries should take them.
- Emission reductions should be made in those countries in which it is most cost-effective to do so.

Table 6.9 lists the range of policy core beliefs of the economic growth coalitions examined in this study. Statements by members of the coalitions would generally receive a score of around 1 or 2 (on a scale of 1 to 5) when coded using the coding framework described in the Appendix.

6.2.2. The Economic Growth Coalition in the International Climate Policy Subsystem

The international economic growth coalition was comprised primarily of officials from the economic, trade, energy and, to some extent, foreign and other ministries of OECD countries; representatives from industry groups and coalitions, and government officials from oil-producing developing countries. While some international industry organizations, such as the International Chamber of Commerce were present in some of the early meetings, its representatives did not do much in terms of coordination. The Global Climate Coalition, formed in 1989 to coordinate a common industry position within the United States, filled this role during most of the INC meetings, as most of the business representatives at these meetings were members. This effort was less successful in the later stages of the process as other business organizations holding slightly more moderate views, such as the Business Council for Sustainable Energy (BCSE) and

⁴⁷ For example, Richard Darman, the Director of the Office of Management and Budget for the Bushy Administration, suggested in a speech at Harvard University in 1990, that the values of “the love of freedom, respect for individual rights, distrust of excessively-centralized authority, appreciation of markets, a confident faith in the future, and a heroization of risk-taking and the pioneering spirit..” led to America’s strength, and that “the environment can and should be protected within a pluralistic, market-and-growth-oriented framework.” Some members of this coalition, particularly within the United States, were also driven by the ideological concern that environmentalists would use the climate change issue to impose their “anti-growth agenda” on the U.S. economy (Nitze, William A. 1994. *A Failure of Presidential Leadership*. In *Negotiating Climate Change: The Inside Story of the Rio Convention*, ed. Irving M. Mintzer and J. Amber Leonard. Cambridge: Cambridge University Press.

the International Climate Change Partnership (ICCP), became active.⁴⁸ Figure 6.5 shows belief scores of coalition members for the periods 1988-1992 and 1992-1997, while Table 6.10 lists some of the major international and non-government organizations that participated in this coalition.⁴⁹

Table 6.10 Policy Core Beliefs of the Economic Growth Coalition	
Policy core beliefs concerning climate change theory and models	
Validity of theory that anthropogenic GHG emissions are causing global warming.	<ol style="list-style-type: none"> 1. Theory is not valid/any warming is due to natural events 2. Theory is highly questionable/any warming is due primarily to natural events 3. Theory is somewhat uncertain/cause of any warming is unclear
Precision of climate models	<ol style="list-style-type: none"> 1. Models are highly inaccurate/completely inconsistent with observational data 2. Models are generally inaccurate/mostly inconsistent with observational data 3. Models are of uncertain accuracy/partially consistent with observational data
Clarity of current climate trends	<ol style="list-style-type: none"> 1. The global climate is not warming 2. The global climate does not appear to be warming 3. Current trends are unclear
Policy core beliefs concerning impacts of climate change and responses	
Threat posed by climate change	<ol style="list-style-type: none"> 1. Climate change is not a threat/could have benefits 2. Climate change is not likely to be a significant threat 3. Risk is unclear
Economic costs of short-term responses	<ol style="list-style-type: none"> 1. Economic costs of short-term responses will be very high/much greater than costs of impacts 2. Economic costs of short-term responses will be high/most likely to be greater than costs of impacts 3. Costs of short-term responses are not clear/may be as high as costs of impacts
Policy core beliefs concerning nature of policy responses	
Basis for national policy responses	<ol style="list-style-type: none"> 1. Policy responses should be taken only when clearly justified by the science. 2. Policy responses should be taken when justified for other reasons ("no regrets"). 3. Low cost/cost effective responses are justified now.
Industrialized country responses/commitments before 2000.	<ol style="list-style-type: none"> 1. National actions should be voluntary (i.e., bottom-up approach, no targets or timetables) 2. National targets may be set according to national circumstances, but no timetable should be adopted 3. Countries should stabilize emissions, but no timetable should be adopted
Commitments after 2000	<ol style="list-style-type: none"> 1. No commitments should be made 2. Further commitments should be made, but only after thorough analysis. 3. Countries should commit to stabilization/reduction with differentiated targets and/or flexibility.
Mandated/ coordinated policy instruments	<ol style="list-style-type: none"> 1. Encourage voluntary actions only/no taxes or regulations 2. Encourage voluntary actions, modest demonstration programs, etc. 3. Adopt some market-oriented policies (i.e., taxes), encourage voluntary actions.
Policy core beliefs concerning scope and coordination of commitments	
Developing country vs. industrialized country commitments.	<ol style="list-style-type: none"> 1. Industrialized and developing countries must make similar commitments. 2. All countries must commit to specific emissions reductions, but industrialized countries must do more. 3. Developing countries must commit to limiting growth in emissions.
Coordination or cooperation in national responses/ joint implementation	<ol style="list-style-type: none"> 1. National responses may be coordinated among all countries without limits/full joint implementation 2. National responses may be coordinated among all countries with minor limitations 3. National responses may be coordinated among industrialized countries/other countries with limits.

⁴⁸ Interview #6. Climate Council, United States. Jan., 2005; Interview #4. Global Climate Coalition, United States. Jan., 2005; Interview #13. National Mining Association, United States. Jan., 1998.

⁴⁹ The organizations included on this table are those that participated in three or more meetings of the IPCC, the INC, or the FCCC's COP. Although many more organizations participated in one or two meetings, they were not considered to be major coalition members because of the short duration of their involvement.

Table 6.10 Major IGOs and NGOs in the International Economic Growth Coalition

General Industry Associations	Labor/Workers Organizations
Alliance for Responsible Atmospheric Policy	American Federation of Labor and Congress of Industrial Organizations
Alliance for Responsible Environmental Alternatives	Australian Council of Trade Unions
Business Council for A Sustainable Energy Future	International Federation of Industrial Energy Consumers
Business Council of Australia	United Mine Workers of America
Business Council on National Issues	Natural Resources/Agriculture Industry Associations
Center for Business and the Environment	Natural Resource Users' Group
Climate Council	New Zealand Forest Owners' Association Inc.
Confederation of Finnish Industries	Nuclear Energy Organizations
European Business Council for A Sustainable Energy Future	International Atomic Energy Agency
Federal Association of the German Industry	Uranium Institute
Global Climate Coalition	Utility/Energy Distribution Industry Associations
International Chamber of Commerce	Canadian Electrical Association
International Climate Change Partnership	Edison Electric Institute
Japan Federation of Economic Organizations (Keidanren)	Federation of Electric Power Companies
World Business Council for Sustainable Development	International Union of Producers and Distributors of Electrical Energy
Fossil Fuels Industry Associations	National Association of Regulatory Utility Commissioners
Australian Coal Association	National Rural Electric Cooperative Association
Canadian Petroleum Association	Economic Policy Research Organizations
Coal Association of Canada	Global Industrial and Social Progress Research Institute
International Gas Union	Korea Energy Economics Institute
International Petroleum Industry Environmental Conservation Assoc	Transportation Industry Associations
National Coal Association	International Organization of Motor Vehicle Manufacturers
Organization of Petroleum Exporting Countries Secretariat	Other Advocacy Organizations
World Coal Institute	Sovereignty International

As was discussed in Section 6.1, members of the economic growth coalition were a small minority of the participants in the international climate change policy subsystem at the onset of the policy process. However, they had substantial economic resources at their disposal. A critical attribute of the climate change problem is the direct relationship between GHG emissions and economic activity. The world's three largest economies, the United States, Japan, and Russia, accounted for over 60 percent of global GHG emissions in 1990. Because an effective treaty regime requires the participation of these three countries, the coalitions dominating the national subsystems in these countries had effective veto power over the substance of the treaty language. As will be discussed in the following chapters, the Economic Growth coalition dominated the national subsystems of the United States and Russia during the period between 1988 and 1992. Although it lost its dominance in the United States during the period between 1992 and 1997, it maintained its dominance in Russia, and was able to gain sufficient power in Japan such that neither coalition was dominant in that subsystem.

In addition, the wealthier governments, particularly Japan and the United States, could send larger delegations to the negotiating sessions and undertake more research into key issues. In contrast, few governments from the smallest but most vulnerable countries, the Small Island States, could afford to send more than one or two delegates to the negotiating sessions. Developing country governments often had to depend on their embassy representatives, many of whom were unfamiliar with the issues being discussed and the state of play of the negotiations.

Furthermore, members of the business community had greater financial resources to spend on research and advertising than did members of the Precautionary Coalition.⁵⁰

However, many members of the Economic Growth coalition had little understanding of or experience with international treaty negotiations or international environmental issues when the international process started in 1988, and had to spend substantial resources in gaining knowledge of the issues.⁵¹ In addition, the perception of global climate change as an environmental rather than an economic issue hampered early efforts by the Economic Growth coalition to recruit additional members.⁵² Most corporations were focused primarily on domestic markets during the 1980s and had little interest in what they perceived to be an obscure international environmental issue.⁵³ Although this perception changed to some degree through the course of the 1990's as economic globalization took place, the number of participants in Economic Growth coalition remained far fewer than that of the Precautionary Coalition.

6.2.3. The Economic Growth Coalition in the United States

The economic growth coalition in the United States was particularly vehement in its opposition to the FCCC and the Kyoto Protocol, and were the most visible of the coalitions in the opposition.⁵⁴ Prior to 1992, the principal actors in the Economic Growth coalition in the United States were high-level officials of the White House, including John Sununu, President Bush's Chief of Staff; Michael Boskins, Chairman of the Council of Economic Advisors (CEA), Admiral James Watkins, Secretary of Energy; Richard Darman, Director of the Office of Management and Budget, and Roger Porter, Bush's domestic policy advisor.⁵⁵ Although Sununu was ultimately replaced in 1991, the Economic Growth coalition remained entrenched in the Bush Administration until the 1992 elections, with strong representation within the Departments of Interior, Commerce, Energy and Agriculture.⁵⁶ Table 6.12 lists the major organizations participating in the U.S. economic growth coalition and their belief scores for the 1988-1992 and 1992-1997 periods. Figure 6.7 shows average belief scores for these participants.

⁵⁰ Interview #4. Global Climate Coalition, United States. Jan., 2005.

⁵¹ Interview #6. Climate Council, United States. Jan., 2005; Interview #4. Global Climate Coalition, United States. Jan., 2005.

⁵² See Bodansky, Daniel. 1994. Prologue to the Climate Change Convention. In *Negotiating Climate Change: The Inside Story of the Rio Convention*, ed. Irving M. Mintzer and J. Amber Leonard. Cambridge: Cambridge University Press.

⁵³ Interview #4. Global Climate Coalition, United States. Jan., 2005.

⁵⁴ McCright, A. M. and Riley E. Dunlap. 2003. Defeating Kyoto: The conservative movement's impact on U.S. climate change policy. *Social Problems* 50, 3: 348-373.

⁵⁵ Sununu was openly skeptical of the predictions by climate models, and was concerned that an agreement on climate change would strengthen the Soviet Union, which had large natural gas resources. Trained as an engineer, he often read technical articles and engaged scientists in debates on technical details. He even had a small climate model installed in a computer in his office (Barnes, Fred. 1990. Raging bulls - John Sununu, Richard Darman block tougher environmental policies. *New Republic*, Mar. 19, 1990. pg. 11). Darman repeatedly stressed the primacy of economic growth over environmental protection. During the preparations for the 1991 G-7 Summit, he reportedly told Bush, "Remember, there has never been an environmental regulation that has not hurt the economy." (Easterbrook, Gregg. 1992. Black thumbs: Bush's green screwup. *New Republic*, Nov. 16, 1992. pg. 26).

⁵⁶ Easterbrook. 1992. Black thumbs: Bush's green screwup.

Table 6.12 Major Organizations participating in the U.S. Economic Growth Coalition

	1988-1992
Economic Policy Research Organizations	General Industry Associations
American Enterprise Institute	International Chamber of Commerce
Accuracy in Media	Global Climate Coalition
Heritage Foundation	Government Agencies
Competitive Enterprise Institute	Department of State
George C. Marshall Institute	Department of Energy
Cato Institute	Department of Justice
Science and Environmental Policy Project	Office of the President
Fossil Fuels Companies	Office of Science and Technology Policy
ENRON Corporation	Department of Treasury
Texaco, Inc	Council of Economic Advisors
Pitts Energy Group	Transportation Companies
Fossil Fuels Industry Associations	General Motors
American Petroleum Institute	Utility/Energy Distribution Industry Associations
National Coal Association	Edison Electric Institute
The Climate Council	Electricity Consumers Resource Council
Western Fuels Association	Electric Power Research Institute
	1992-1997
Economic Policy Research Organizations	Housing/Construction Industry Associations
Charles River Associates, Inc	National Concrete Masonry Association
Economic Strategy Institute	American Portland Cement Association
Competitive Enterprise Institute	Nat. Assn. of Plumbing, Heating and Cooling Contractors
Heritage Foundation	Association of General Contractors
Science and Environmental Policy Project	Labor/Workers Organizations
Center for the Study of American Business	AFL/CIO
George C. Marshall Institute	United Mine Workers of America
Hoover Institution	Manufacturing Industry Associations
American Council for Capital Formation	National Association of Manufacturers
Cato Institute	Chemical Manufacturers Association
Center for Clean Air Policy	American Iron and Steel Institute
Fossil Fuels Companies	International Federation of Industrial Energy Consumers
Conoco, Inc	Natural Resources/Agriculture Companies
Mobil Corporation	American Forest & Paper Association
Exxon Corporation	Stone Container Corporation
Fossil Fuels Industry Associations	National Grange
Natural Gas Supply Association	American Farm Bureau Federation
Western Fuels Association	National Association of Wheat Growers
Climate Council	Other Advocacy Organizations
American Petroleum Institute	Sovereignty International
National Mining Association	Committee for a Constructive Tomorrow
General Industry Associations	Coalition for Vehicle Choice
International Climate Change Partnership	Citizens for a Sound Economy Foundation
Business Roundtable	Transportation Industry Associations
Global Climate Coalition	American Automobile Manufacturing Association
U.S. Chamber of Commerce	American Trucking Association
United Fresh Fruit and Vegetables Association	Association of American Railroads
General Policy Research Organizations	National Automobile Dealers Association
National Center for Public Policy Research	Utility/Energy Distribution Companies
National Center for Policy Analysis	American Electric Power Services
Government	National Association of Regulatory Utility Commissioners
Senate	Edison Electric Institute
House of Representatives	Northern Indiana Public Service Company
Treasury Department	Commonwealth Edison Company
Utility/Energy Distribution Industry Associations	Public Service Electric and Gas
American Public Power Association	Wisconsin Energy Company
Electric Power Research Institute	

The number of organizations actively participating in the coalition grew significantly after UNCED and the signing of the FCCC. Much of this increase was due to an increased awareness

of the issue created by media coverage of the Rio conference.⁵⁷ Although a number of members of Congress, primarily Republican and Democratic senators from coal-producing and heavily industrialized states, were critical players in this Coalition through both the 1988-92 and 1992-97 periods, many more became active after the Republican Party gained control of both houses of Congress in 1994. A wide variety of actors from many different industrial sectors were also active in the Economic Growth Coalition, most important of which were the representatives of energy generation and distribution, mining, transportation, and chemical manufacturing sectors.

Table 6.11 Belief Scores of the International Economic Growth Coalition

1988-1992					
Country Group	Organization description	Ave. Belief Score	Country Group	Organization description	Ave. Belief Score
CIS/Russia	Meteorological Service	2.5	United States	Foreign Affairs Ministry	2.5
OPEC	Fossil Fuels Industry Assoc.	2.7		General Industry Assoc.	2.5
	Energy Ministry	2.2		Manufacturing Industry Assoc.	2.1
	Foreign Affairs Ministry	1.8		Utility/Energy Distribution Industry Assoc.	2.0
	Environment Ministry	1.5		Energy Ministry	1.9
Other OECD	Foreign Affairs Ministry	2.7		Fossil Fuels Industry Assoc.	1.9
	Meteorological Service	2.5		Economic Ministry	1.4
1992-1997					
CIS/Russia	Environment Ministry	3.0	G77	Planning Ministry	3.0
	Meteorological Service	2.5	United States	Economic Ministry	2.1
EU/Switzerland	Fossil Fuels Industry Assoc.	2.0		Economic Policy Research Org	1.5
	Manufacturing Industry Assoc.	1.9		Energy Ministry	2.2
	Utility/Energy Distribution Industry Assoc.	2.3		Fossil Fuels Industry Assoc.	1.6
OPEC	Embassy	2.8		General Industry Assoc.	2.3
	Energy Ministry	2.3		General Policy Research Org.	2.2
	Environment Ministry	1.8		Manufacturing Industry Assoc.	2.1
	Foreign Affairs Ministry	1.6		Other Advocacy Org.	1.3
Other OECD	Fossil Fuels Industry Assoc.	2.7		Utility/Energy Distribution Company	2.3
	Foreign Affairs Ministry	2.6		Utility/Energy Distribution Industry Assoc.	2.3
	Meteorological Service	2.0			

Unlike its international counterpart, the economic growth coalition in the United States had substantial resources at its disposal at the onset of the climate change policy process. A significant resource for the economic growth coalition in the United States was the structural dependence of the United States on fossil fuels.⁵⁸ By the early 1990s, the United States was the

⁵⁷Interview #4. Global Climate Coalition, United States. Mar., 1989; Mazur and Lee. 1993. Sounding the Global Alarm: Environmental Issues in the US National News; Dalby. 1996. Reading Rio, writing the world: The New York Times and the 'Earth Summit'.

⁵⁸Levy, D. L. and D. Egan. 1998. Capital contests: National and transnational channels of corporate influence on the climate change negotiations. *Politics & Society* 26, 3: 337-361.

largest emitter of greenhouse gases and had the second highest per capita emissions of CO₂ of all OECD countries, in large part because of its high standard of living, climate, low energy prices, and a transportation infrastructure that favored the use of automobiles.⁵⁹ Oil was the largest single energy source, accounting for 38 percent of energy demand in 1992. Transportation accounted for over 35 percent of U.S. energy demand in 1992, while industry consumed about 31 percent and the residential/commercial sector used about 30 percent of U.S. energy demand.⁶⁰

This structural dependence provided the fossil fuels industry with strong ties to Congress, particularly in rural states such as Texas, Louisiana and West Virginia. Coincidentally, Congressional rules regarding seniority provided representatives from these states with a disproportionate amount of power within Congress, as they tended to be re-elected more frequently than their counterparts from more urban areas.⁶¹ In addition, they frequently had allies from states with economies heavily dependent on transportation or construction-related industries, such as Michigan, Indiana and Ohio.

This structural dependence on fossil fuels also provided the economic growth coalition with substantial financial resources. For example, the Global Climate Coalition spent over \$3 million between 1994 and 1996 on the climate change issue. The National Coal Association spent more than \$700,000 in 1992 and 1993 on activities related to climate change, while the American Automobile Manufacturers Association spent over \$200,000 on similar activities.⁶² Although figures are not available for the amounts spent on climate change by other organizations, such as the American Petroleum Institute, the resources available to these organizations are far greater than those available to non-profit environmental groups.

The economic growth coalition was also able to use the general lack of understanding about climate change on the part of the general public to their advantage. The general public has had a number of misconceptions about climate and climate change, including confusion between short-term climate variability and longer-term climate change.⁶³ Members of the economic growth coalition were able to cause a certain amount of public confusion by pointing to various short-term cold spells as evidence that the theory of climate change was flawed.⁶⁴

⁵⁹Energy-related CO₂ emissions in 1992 constituted 48 percent of all OECD emissions and 23 percent of world emissions (World Resources Institute. 1994. *World Resources 1994-1995*. New York, Oxford: Oxford University Press).

⁶⁰OECD/IEA. 1994. *Climate Change Policy Initiatives: 1994 update*.

⁶¹McCubbins and Sullivan. 1987. *Congress: Structure and Policy*.

⁶²Gelbspan, Ross. 1997. *The Heat Is On: The High Stakes Battle Over Earth's Threatened Climate*. Reading, MA: Addison-Wesley Publishing Company, Inc.

⁶³See, e.g., Rebetz, M. 1996. Public expectation as an element of human perception of climate change. *Climatic Change* 32, 4: 495-509; Berk, R. A. and D. Schulman. 1995. Public Perceptions of Global Warming. *Climatic Change* 29, 1: 1-33; Dunlap, Riley E. 1998. Lay perceptions of global risk - Public views of global warming in cross-national context. *International Sociology* 13, 4: 473-498; Ungar, S. 1994. Apples and Oranges - Probing the Attitude-Behavior Relationship For the Environment. *Canadian Review of Sociology and Anthropology-Revue Canadienne De Sociologie Et D Anthropologie* 31, 3: 288-304.

⁶⁴Bord, R. J., A. Fisher, and R. E. O'Connor. 1998. Public perceptions of global warming: United States and international perspectives. *Climate Research* 11, 1: 75-84; Cohen, Susan. The Warm Zone; Admit it: You don't know what to believe about global warming. But don't worry. We're here to tell you why you're not alone. *Washington Post*, July 16, 1995. Magazine pg. 17.; Bostrom, A., M. Granger Morgan, B. Fischhoff, and D. Read. 1994. What do people know about global climate change? *Risk Analysis* 14, 6: 959.

6.2.4. The Economic Growth Coalition in the Netherlands

Prior to 1992, the economic growth coalition in the Netherlands was quite small, consisting primarily of the Ministry of Economic Affairs, the Liberal Party in Parliament, VNO-NVW, the major employers association in the Netherlands, and the Dutch Chemical Industry Association (VNCI). After 1992, they were joined by the Ministry of Finance; the Ministry of Transport, Public Works and Water Management; and SEP, the major association of utilities in the Netherlands. Throughout these two periods, very few private corporations joined the coalition. These corporations tended instead to focus their energies on specific measures, such as an energy tax, that they believed were harmful to their interests. As shown in Table 6.15, the beliefs of the Dutch economic growth coalition were a bit more “green” than their counterparts in the United States. This is due in part to the generally stronger environmental ethic held by the Dutch, and Europeans in general.

Like its counterpart in the United States, the Dutch economic growth coalition had

1988-1992	
Government Agencies Ministry of Economic Affairs	General Industry Associations VNO-NVW
Legislature Liberal Party (VVD)	Dutch Chemical Industry Association (VNCI)
1992-1997	
Government Agencies Ministry of Economic Affairs Ministry of Finance Ministry of Transport, Public Works and Water Management	General Industry Associations VNO-NVW Dutch Chemical Industry Association (VNCI)
Legislature Liberal Party (VVD)	Utility/Energy Distribution Industry Assoc. Samenwerkende Elektriciteits-Productiebedrijven (SEP)

Organization	Average Belief Score
Government Agencies	
Ministry of Economic Affairs	1.9
Ministry of Finance	1.8
General Industry Associations	
VNO-NVW	2.1
Dutch Chemical Industry Association (VNCI)	2.5
Legislature	
Liberal Party (VVD)	3.3
Utility/Energy Distribution Industry Assoc.	
Samenwerkende Elektriciteits-Productiebedrijven (SEP)	1.0

substantial resources at its disposal when the climate change policy process began in the late 1980's. Industrial production is an important element of the Dutch economy.⁶⁵ The chemical industry is particularly important, constituting almost 17 percent of industrial production in 1997, employing 9 percent of industrial workers, and contributing 16 percent of exports. Industry as a

⁶⁵ Laroui, F. and M. J. vanLeeuwen. 1996. Fiscal policy and greenhouse gases: The case of the Netherlands. *Ecological Economics* 18, 3: 231-241.

whole contributed 43 percent of total energy consumption in the Netherlands, and industrial sources contributed 27 percent of total CO₂ emissions in 1995. The chemical industry was chief contributor, contributing 10 percent of all emissions and consuming 32 percent of industrial consumption of energy in 1998.⁶⁶

The Economic Growth Coalition also controlled key Ministries. While VROM had responsibility for coordinating the preparation of the NEPP, and could thus dictate much of the agenda, the Ministry of Economic Affairs had ultimate responsibility for regulating industry. Most of the measures proposed in the NEPP and NEPP-II consisted of voluntary agreements, or covenants, with various industrial sectors. The Netherlands Agency for Energy and Environment (Novem) negotiates these agreements with industry groups on behalf of the Ministry of Economic Affairs, and the final agreement is signed by the Minister of Economic Affairs.

The economic growth coalition was also strengthened by strong ties between industry interests and the Ministry of Economic Affairs brought about by the traditional “consensus-building” approach to policy development in the Netherlands and the reliance of Dutch industries on organized associations. Industry groups could rely on the Ministry of Economic Affairs to represent its interests in intra-governmental discussions, while the Ministry of Economic Affairs could have confidence that individual corporations would go along with any agreements struck with industry groups such as VNO-NVW and VNCI.⁶⁷

The Dutch economic growth coalition was also constrained by number of factors. As in the other subsystems, participants in the Dutch economic growth coalition suffered from a relatively poor understanding of the scientific aspects of climate change. This weak understanding was exacerbated by language difficulties. The Summary Reports for Policy Makers prepared by the IPCC were written in English, as were most other documents intended to provide decision-makers with general background information on climate change. Because most people in the Netherlands speak conversational English fluently, little effort was made to translate these documents into Dutch. However, the technical language contained in these documents was very difficult for lay readers for whom English is a second language to understand. This difficulty in turn hampered efforts by the coalition to recruit additional participants.⁶⁸

In addition, the tremendous public support for strong environmental measures made it difficult for the Ministry of Economic Affairs to object on economic grounds to measures proposed by VROM in the NEPP and NEPP-II, particularly since these ministries had committed themselves to the general objectives of the NEPP when the planning process was first established in the mid-1980s. The scientific credibility of the report *Concern for Tomorrow* and its status within the government effectively neutralized arguments they might have made regarding the scientific basis of the problems.⁶⁹

⁶⁶ Kasa, Sjur. 2000. *Explaining Emission Tax Exemptions for Heavy Industries: A Comparison of Norway, Denmark and the Netherlands*. Oslo, Norway: Center for International Climate and Environmental Research.

⁶⁷ deRoo, G. and D. Miller. 1997. Transitions in Dutch environmental planning: New solutions for integrating spatial and environmental policies. *Environment and Planning B-Planning & Design* 24, 3: 427-436; Kasa. 2000. *Explaining emission tax exemptions for heavy industries: A comparison of Norway, Denmark and the Netherlands*.

⁶⁸ Interview #40. Ministry of Economic Affairs, Netherlands. Feb., 1997.

⁶⁹ Bennett. 1991. *The History of the Dutch National Environmental Policy Plan*.

6.2.5. The Economic Growth Coalition in Japan

The composition of the Economic Growth Coalition in Japan was very similar to its counterpart in the Netherlands, although more government agencies were participants in the early parts of the process. Prior to 1992, the principal actors were from the Ministry of International Trade and Industry, the Ministry of Finance, and a few industry groups such as the Federation of Electric Power Companies and MITI's Advisory Committee on Energy. Additional government agencies became involved as negotiations for the FCCC ensued, such as the Ministry of Transport and the Ministry of Construction. However, it was not until after 1992 that a significant number of industry groups, such as Keidanren and the Japan Electrical Manufacturers Association, became active in the coalition.

Like the Netherlands, Japan has a "consensual" approach to policymaking that fosters strong ties between government agencies and the economic sectors on which they focus. Each ministry has a set of Advisory Councils consisting of various stakeholders through which they exchange information and reach a consensus on government activities. The various industrial sectors affected by climate change were also well organized through Keidanren, which is the overarching association representing Japanese industry.

The economic growth coalition in Japan was also constrained by a general lack of understanding of the scientific issues associated with climate change. Unlike in the Netherlands, however, far fewer people in Japan speak English fluently. As a result, many more documents were available that explained the basic issues associated with climate change. However, the coalition was hampered by another aspect of Japan's institutional structure: bureaucratic turnover. Most mid- and upper-level officials in Japanese agencies are expected to change positions every two years or so in order to advance their careers. Mastering the tremendous complexity of the range of issues associated with climate change in this short period of time, however, is difficult, and higher-level members of Japan's delegations to the international policy process might only participate in two or three international meetings before moving on. This was

Table 6.14 Organizations participating in the Japanese Economic Growth Coalition

1988-1992	
<p>Government Agencies Ministry of International Trade and Industry Ministry of Finance Ministry of Construction</p>	<p>Economic Policy Research Organizations Global Industrial and Social Progress Research Institute Utility/Energy Distribution Industry Associations Federation of Electric Power Companies Advisory Committee on Energy</p>
1992-1997	
<p>Government Agencies Ministry of Finance Ministry of Construction Ministry of International Trade and Industry Economic Policy Research Organizations Global Industrial and Social Progress Research Institute Institute of Energy Economics General Industry Associations Japan Federation of Economic Organizations (Keidanren) Japan Industrial Conference for Ozone Layer Protection</p>	<p>Manufacturing Industry Associations Japan Electrical Manufacturers' Association Japan Fluorocarbon Manufacturers Association Utility/Energy Distribution Industry Associations Central Research Institute of Electric Power Industry Federation of Electric Power Companies Global Environmental Action Advisory Committee on Energy</p>

particularly a problem for MITI, which tends to attract the most ambitious members of the civil service.⁷⁰ In contrast, the average tenure in Japan's Environment Agency tends to be longer, about three to four years.⁷¹

Although the various international and national precautionary and economic growth coalitions held similar policy core beliefs and each cooperated with their counterparts in other subsystems, their behavior was different in each of the subsystems. The external events that shaped their behavior and affected their political resources and constraints were also different for each subsystem. These events and behaviors that drove the political dynamics within each climate policy subsystem and the other subsystems with which they overlapped are described in the following four chapters.

⁷⁰ Interview #64. Ministry of Industry and Trade, Japan. Feb., 1998.

⁷¹ Interview #21. Environment Agency, Japan. Feb., 1998. These assertions are supported by an analysis of meeting participant lists indicating that the average participation rate for MITI delegates was 2.9 INC/COP meetings, while the average participation rates for Environment Agency and MFA delegates were 4.4 and 5 meetings, respectively. The participation rate is the average number of INC/COP meetings in which a given delegate participated between 1990 and 1997.

CHAPTER 7 - THE INTERNATIONAL CLIMATE POLICY SUBSYSTEM

7.1 INTRODUCTION

The processes of the international climate change subsystem that gave rise to the Kyoto Protocol can be regarded as occurring in three general phases: the IPCC/INC phase (1988-1992), the COP I/Berlin Mandate Phase (1992-1994), and the AGBM/Kyoto Protocol phase (1994-1997). Each of these phases had a distinct policy outcome:

- The IPCC/INC phase resulted in the establishment of the INC and the negotiation of the Framework Convention on Climate Change;
- The COP I/Berlin Mandate Phase resulted in the formation of the Ad Hoc Group on the Berlin Mandate and the decision to negotiate a protocol; and,
- The AGBM/Kyoto Protocol phase resulted in the Kyoto Protocol itself.

Each of these phases also had a distinct outcome in terms of commitments by industrialized countries to reduce their emissions:

- The IPCC/INC phase resulted in emissions reductions "aim" in the Framework Convention on Climate Change;
- The COP I/Berlin Mandate Phase resulted in the decision that this commitment was insufficient; and
- The AGBM/Kyoto Protocol phase resulted in the specific emissions reduction targets in the Kyoto Protocol.

This chapter summarizes the dynamics that transpired within this subsystem between 1988 and 1997.

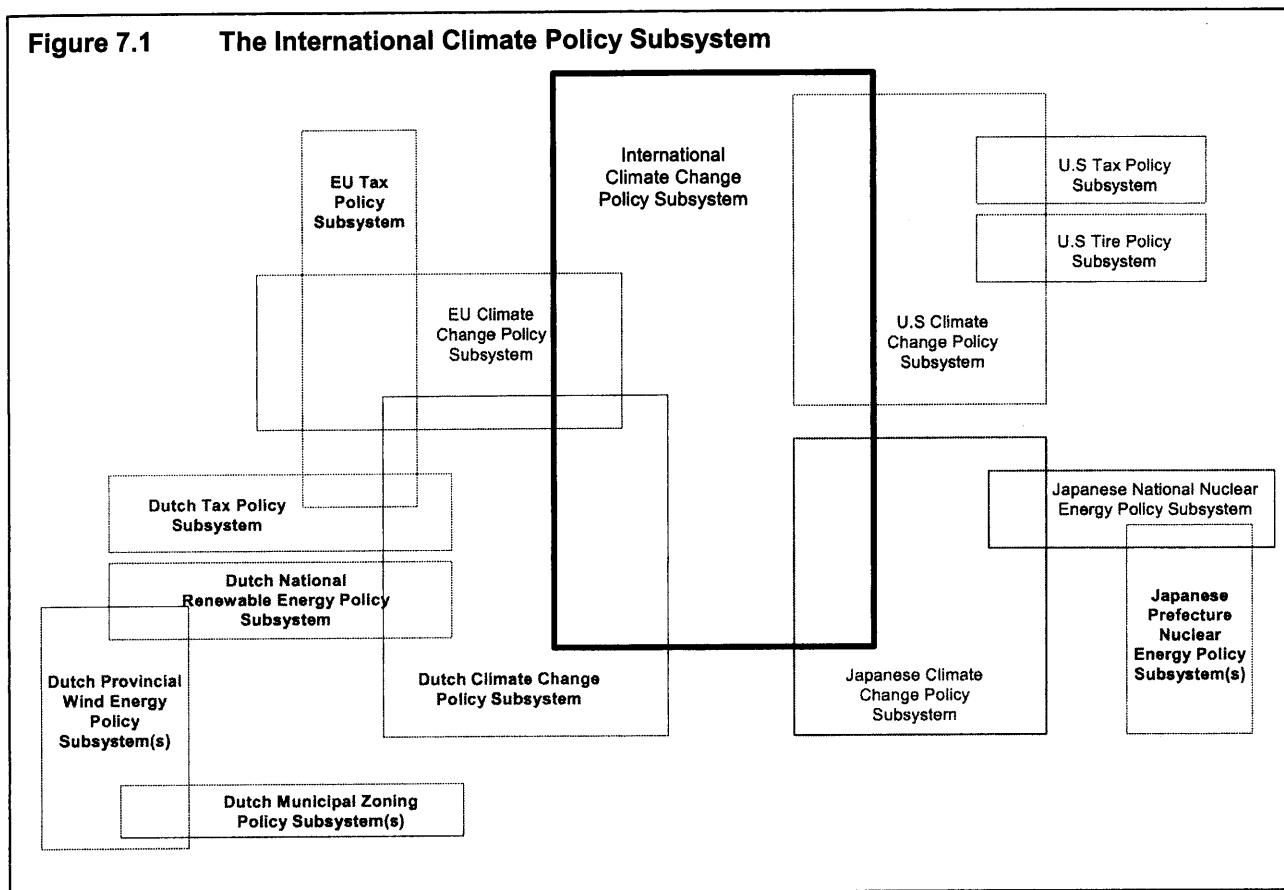
7.2 DYNAMICS OF THE INTERNATIONAL CLIMATE CHANGE SUBSYSTEM

The Precautionary Coalition can be said to have dominated the international climate change subsystem during all three phases of the international process by being able to set the agenda and dictating many of the terms of debate. The Economic Growth Coalition gained strength in the latter stages of the IPCC/INC phase as powerful members became active in the subsystem. Although this was sufficient to force a compromise on the policy outcome of that phase, they arrived too late, to change the course of the discussions. The Economic Growth coalition lost important members during the second two phases of the process, which enabled the Precautionary Coalition to gain dominance in the subsystem. As a result, the Kyoto Protocol generally reflects the policy core beliefs of the Precautionary Coalition.

7.2.1. Phase 1: The IPCC and the INC (1988-1992)

The first phase of politics within the international climate change subsystem started with the chain of events leading to the creation of the Intergovernmental Panel on Climate Change (IPCC) in 1988, and ended with the signing of the UNFCCC at the U.N. Conference on Environment and Development (UNCED) in June of 1992.

Figure 7.1 The International Climate Policy Subsystem



The Intergovernmental Panel on Climate Change

The international climate change policy process, which began with the chain of events that led to the creation of the IPCC, was initiated primarily by members of the Precautionary Coalition. After the successful completion of the Vienna Convention on the Protection of the Stratospheric Ozone Layer in 1985, UNEP Executive director Moustafa Tolba began to urge national governments to initiate negotiations for a climate treaty, and proposed in 1987 that UNEP convene a panel of experts to draft such an agreement.¹ Many OECD governments, represented in UNEP by their Environment Ministries, were supportive of this effort, as were representatives of the U.S. State Department and the U.S. Environmental Protection Agency. However, officials from the White House, the U.S. Department of Energy, the Department of Commerce, and the U.S. Trade Representative, the only members of the Economic Growth coalition participating in the process at the time, were not. They viewed the scientific assessments prepared thus far as being less than objective and that it was premature to consider a climate change treaty.² These officials were essentially the only members of the economic

¹ Agrawala, S. 1999. Early science-policy interactions in climate change: lessons from the Advisory Group on Greenhouse Gases. *Global Environmental Change-Human and Policy Dimensions* 9, 2: 157-169.

² Interview #18. See also Agrawala, S. 1998. Context and early origins of the intergovernmental panel on climate change. *Climatic Change* 39, 4: 605-620; Agrawala, S. 1998. Structural and process history of the

growth coalition participating in the discussions at the time. Many developing countries, dismayed that they had been left out of the process thus far, also resisted the proposal, as did many individuals within WMO, viewing it as further encroachment into an area for which they have prime responsibility.³

As a compromise, the United States proposed that UNEP and WMO jointly create an intergovernmental panel to conduct a thorough scientific assessment of the problem and potential responses.⁴ The United States was able to prevail with this proposal, in part because it was the largest contributor to UN programs and the provider of half of all climate research at the time, and the IPCC was established in the spring of 1988. It was charged with preparing, in time for the Second World Climate Conference in 1990, “internationally coordinated assessments of the magnitude, timing and potential environmental and socio-economic impact of climate change and realistic response strategies.”⁵

Because the IPCC was the only intergovernmental process in place that was addressing the climate change issue, it quickly became the forum for debating political issues as well. Many people expected these negotiations to occur in the IPCC, and both the Precautionary and Economic Growth Coalitions used the IPCC meetings to advance their agendas. For example, it was at the first meeting of the Response Strategies Working Group, in February, 1989, that Secretary of State James Baker first announced the United State’s “no regrets” policy, calling for “prudent steps that are already justified on grounds other than climate change.”⁶ At the same meeting, delegations from several European nations introduced a statement asking the IPCC to endorse stabilization of carbon dioxide emissions by the year 2000.⁷ A year later, in February of 1990, the United States used the third meeting of Working Group III to hold a “Saturday Seminar” in which White House Counselor C. Boyden Gray and Assistant Attorney General Richard Stewart introduced the “comprehensive approach” for dealing with greenhouse gases.⁸

intergovernmental panel on climate change. *Climatic Change* 39, 4: 621-642; Hecht and Tirpak. 1995. Framework Agreement on Climate Change: A Scientific and Policy History; and Bodansky, Daniel. 1995. The Emerging Climate Regime. *Annual Review of Energy and the Environment* 20: 425-61.

³ Interview #58. Bert Bolin, the first Chairman of the IPCC, was quoted as saying “the IPCC was established because many countries, especially developing countries, simply don’t trust assessments in which their scientists and policymakers have not participated.” (Schneider, Stephen H. 1991. Three Reports of the Intergovernmental Panel on Climate Change. *Environment* 25, Jan-Feb: 25).

⁴It should be noted here that a number of individuals within the U.S. government, most notably from the State Department and the Environmental Protection Agency, supported Tolba’s proposal for a climate treaty, but saw the IPCC as a way to enhance the credibility of the problem, give governments a greater sense of ownership over the process, and ultimately increase pressure for strong responses (Hecht and Tirpak. 1995. Framework Agreement on Climate Change: A Scientific and Policy History; Bodansky. 1993. The United Nations Framework Convention on Climate Change: A Commentary).

⁵ United Nations. 1988. *U.N. General Assembly Resolution 43/53*.

⁶ As will be discussed in the U.S. case study, the substance of this speech, which was written by State Department officials supportive of strong action on climate change, angered John Sununu, the White House Chief of Staff, and Secretary Baker soon recused himself from all climate issues soon afterwards.

⁷ These countries included Austria, Denmark, Finland, France, Germany, the Netherlands, Norway, and Sweden Abramson, Rudy. Panel Rebuffs Global Warming Activists. *Los Angeles Times*, Feb. 8, 1990. A pg. 19).

⁸ Under this approach, all sources and sinks of all greenhouse gases, including CFCs (which were being phased out under the Montreal Protocol), would be included in any accounting system for greenhouse gas reductions (insert Stewart article reference). Members of the Economic Growth coalition favored this approach because it took

At this same meeting, delegations from Sweden, Austria, Denmark, Germany, Finland, France, the Netherlands, Norway, Switzerland and Italy renewed their calls for industrialized countries to commit to stabilizing emissions of carbon dioxide by the year 2000, even though the IPCC had no authority to adopt such policies.⁹

The creation of the IPCC, ostensibly an *ad hoc* scientific body, ultimately benefited the precautionary coalition, as it provided a vehicle for members of the coalition both to improve their understanding of the issue, educate neutral government representatives, and begin to engage in a debate concerning policy measures in which many members of the Economic Growth Coalition were not active. Almost sixty percent of the participants in the IPCC Plenary Meetings prior to the completion of the First Assessment Report were from organizations active in the Precautionary Coalition, while only fourteen percent of the participants were from economic ministries, energy ministries, fossil fuel industry associations, and other organizations involved in the Economic Growth Coalition. Although wider range of actors participated in meetings of the Response Strategies Working Group, members of the Economic Growth Coalition still comprised only eighteen percent of all participants.¹⁰

The Toronto Conference and Other International Meetings

While the IPCC was undertaking its work, members of the precautionary coalition within other governments continued to push for a climate treaty in other fora. Principal among these were a series of high-level environmental conferences that focused on the issue. The first and most important was the June 1988 conference in Toronto, Canada, organized jointly by UNEP, WMO, and Environment Canada, Canada's environment ministry. Although not an official intergovernmental meeting, this conference helped the Precautionary Coalition set the terms of the debate and establish the initial objective of a framework climate change treaty containing legally-binding targets and timetables for GHG emissions reductions.¹¹ Most of the 327 participants at this conference were members of the Precautionary Coalition, while members of the Economic Growth, such as representatives of utilities, manufacturers, the fossil fuel industry, and other business interests, comprised less than six percent of the participants.¹² As might be expected, the final conference declaration called for:

“...the development of a comprehensive global convention as a framework for protocols on the protection of the atmosphere...with a view to having the principles and components of such a convention ready for consideration at the Inter-governmental Conference on Sustainable Development in 1992.”

attention away from energy use, and the United States would get credit for the significant steps it was already taking to phase out CFCs.

⁹ See Monastersky, R. 1990. Bush holds cautious course on global change. *Science News*, Feb. 17, 1990. pg. 102.

¹⁰ Participation data on file with the author.

¹¹ Bodansky. 1993. *The United Nations Framework Convention on Climate Change: A Commentary*; Hecht and Tirpak. 1995. *Framework Agreement on Climate Change: A Scientific and Policy History*.

¹² Participation data on file with the author.

It also called on governments to "...reduce CO₂ emissions by approximately twenty percent of 1988 levels by the year 2005." This twenty-percent reduction target became known as the "Toronto target."¹³

Following the Toronto meeting, members of the Precautionary Coalition, primarily from European governments, pushed the issue of a climate treaty containing binding targets and timetables at a number of subsequent international meetings, including a pair of intergovernmental meetings hosted by the Netherlands in The Hague and Noordwijk during 1989, the Bergen Ministerial Conference on Sustainable Development in Norway in May, 1990. German Chancellor Helmut Kohl and other European also used the G-7 summit meetings to press the issue of climate change with President Bush directly, pushing for commitments to "clear reductions" in greenhouse gases.¹⁴

The U.N. General Assembly

Representatives of a number of low-lying island countries also began to engage the U.N. General Assembly on the issue. Malta, supported by various environmental NGOs, introduced in September of 1988 a resolution declaring that climate change "is a common heritage of mankind."¹⁵ In the face of U.S. opposition, the resolution that was finally adopted fell short of calling for negotiations on a climate treaty. However, Malta introduced a second resolution the following year that again called for negotiations on a climate treaty to begin. The United States again opposed the resolution, arguing that such a decision should not be made until after the IPCC work is completed. However, it was forced to reverse this position in December of 1989 after the Bush Administration was criticized both domestically and internationally for its position on the issue.¹⁶ In December of 1989, the General Assembly adopted a resolution supporting the start of negotiations as soon as the IPCC completed its First Assessment Report. The treaty would to be opened for signature in June of 1992 at the UN Conference on Environment and Development in Rio de Janeiro, Brazil.¹⁷ However, the resolution also stated that the negotiations should proceed under the auspices of the General Assembly rather than under the control of UNEP and the WMO, effectively removing UNEP from the policy process.¹⁸

¹³ Bodansky. 1993. *The United Nations Framework Convention on Climate Change: A Commentary*; Hecht and Tirpak. 1995. *Framework Agreement on Climate Change: A Scientific and Policy History*. It is interesting to note that, according to conference participants, this target was set by employing the rule of thumb used in the business world that a twenty-percent change signals a clear break from the past (Interview #53n). Andresen and Agrawala notes that many of the scientists at the meeting were playing the role of 'substitute policy makers' and that the recommendations were determined more by politics than by science (Andresen, S. and S. Agrawala. 2002. *Leaders, pushers and laggards in the making of the climate regime. Global Environmental Change-Human and Policy Dimensions* 12, 1: 41-51).

¹⁴ Lauter, David. Bush, Kohl draft key compromises; Summit: Agreements on Soviet aid, global warming and trade are likely to shape the 7-nation declaration. *Los Angeles Times*, July 10, 1990. pg. A1; Suro, Roberto. Europeans Accuse the U.S. of Balking On Plans to Combat Global Warming. *New York Times*, July 10, 1990. pg. A10.

¹⁵ U.N. Resolutions 43/53.

¹⁶ Lauter, David. In Policy Shift, U.S. Seeks Talks on Global Warming. *Los Angeles Times*, Dec. 3, 1989. pg. A1. See also Bodansky. 1994. Prologue to the Climate Change Convention.

¹⁷ U.N. Resolution 44/207, Protection of the Global Climate for Present and Future Generations of Mankind.

¹⁸ Most industrialized countries felt that the negotiations should be held under the auspices of UNEP and WMO, in effect continuing the IPCC process. However, many developing countries resisted this, as they felt largely

Unilateral Adoption of Targets and Timetables and the Second World Climate Conference

A number of governments dominated by the Precautionary Coalition also attempted to move the issue forward by adopting targets and timetables unilaterally (Table 7.1). The Netherlands led the way in May of 1990 by announcing its intention to reduce CO₂ emissions by 5 percent from 1990 levels by the year 2000. After the IPCC's Science Working Group, under the leadership of the U.K.'s Sir John Houghton, approved in that same month a draft report predicting a global temperature increase of about 0.3°C per decade, Prime Minister Margaret Thatcher broke from the United States by announcing that United Kingdom would stabilize its emissions of carbon dioxide at 1990 levels by the year 2000.¹⁹ Chancellor Kohl announced in June of 1990 that Germany would reduce its CO₂ emissions by 30 percent from 1987 levels by 2005, and the European Community as a whole followed suit in October by committing to stabilizing CO₂ emissions by the year 2000 at 1990. Even Japan, the only other OECD country at the time that was controlled by the Economic Growth Coalition, adopted a target, although it was heavily qualified.²⁰ These events put tremendous pressure on members the Economic Growth Coalition in the United States, as it was the only industrialized country that had not adopted some sort of emissions target by the time the Second World Climate Conference was held.

The Second World Climate Conference, held in November of 1990, marked the 10th anniversary of the World Climate Program. As with previous conferences, this Conference was largely dominated by the Precautionary Coalition. With most of the conference being technical in nature, most of the participants were from scientific research organizations and ministries, universities, meteorological organizations, and other organizations allied with the Precautionary Coalition. Fewer than six percent of the participants represented groups and organizations that were part of the Economic Growth coalition. As a result, the final Ministerial Declaration reflected much of the Precautionary Coalition's policy core beliefs. For example, it stated that the participating governments welcomed the "decisions and commitments by states to take actions aimed at stabilizing their emissions...by the year 2000 in general at 1990 levels." In the face of U.S. resistance, however, the declaration did not recommend that countries adopt this target. Instead, it urged them "to establish targets and/or feasible national programmes or strategies." The declaration also incorporates several other points favored by the United States, including recognition of "the differences in approach and in starting point in the formation of targets" and an acknowledgement of "the initiatives of some other developed countries which will have positive effects on limiting emissions of greenhouse gases."

It was also at the Second World Climate Conference that Ambassador Robert Von Leirp, the Permanent Representative from Vanuatu and a law professor at NYU law school, began organizing the 40-country strong Alliance of Small Island States (AOSIS). This alliance was to become a voting block of sufficient strength that it could attract substantial support from other

excluded from the IPCC. They also argued that climate change is a development as well as an environmental issue, and that, given its political ramifications, is more appropriately addressed under the auspices of a political rather than a technical body (Bodansky. 1993. *The United Nations Framework Convention on Climate Change: A Commentary*).

¹⁹ Whitney, Craig. 1990. Scientists Urge Rapid Action on Global Warming. *New York Times*, May 16, 1990. 1 pg. 6.

²⁰ Japan announced in October, 1990, that it would "stabilize per capita CO₂ emissions at approximately the 1990 level by 2000," which gave room to accommodate economic growth.

developing countries representative not otherwise engaged in the issue, and was to become a very important group within the Precautionary Coalition.

Table 7.1 National Greenhouse Gas Emissions Targets and Timetables

COUNTRY	TARGET
Australia	"Stabilize GHG emissions based on 1988 levels, by the year 2000 and to reduce these emissions by 20% by the year 2005..."
Austria	20% reduction of CO ₂ emissions based on 1988 levels, by the year 2005
Belgium	5% CO ₂ reduction by 2000 (1990 baseline)
Canada	20% reduction of CO ₂ emissions based on 1988 levels, by the year 2005
Denmark	20% reduction of CO ₂ emissions based on 1988 levels, by the year 2005
France	2 tons of carbon per inhabitant by 2000
Germany	25-30% CO ₂ reduction by 2005
Ireland	20% increase over figures of 1990 in accordance with the EU burden-sharing arrangement under the EU stabilization target
Italy	Stabilization of CO ₂ emissions at 1990 levels by 2000
Luxembourg	Stabilization of CO ₂ emissions by 2000 and 20% reduction of CO ₂ emissions, based on 1988 levels, by the year 2005
Japan	Stabilization of per capita CO ₂ emissions at approximately the 1990 level by 2000
Netherlands	CO ₂ : 3-5% reduction in the year 2000, 1989-1990 base; CH ₄ : 10% reduction in 2000, 1990 base. N ₂ O: Stabilize in 2000, 1990 base. NO _x : 55% reduction in 2000, 1988 base. NMVOCs: 60% reduction in 2000, 1988 base. CO: 50% reduction in 2000, 1990 base
New Zealand	Return net anthropogenic emission of CO ₂ by 2000 to 1990 levels; objective is 20% reduction of CO ₂ emissions based on 1988 levels by the year 2005
Norway	Stabilization of CO ₂ emissions by 2000, 1989 base
Portugal	40% CO ₂ emissions increase by 2000, 1990 base in accordance with the EU burden-sharing arrangement under the EU stabilization target
Spain	25% CO ₂ emissions increase by 2000, 1990 base in accordance with the EU burden-sharing arrangement under the EU stabilization target
Sweden	Stabilization of CO ₂ emissions from fossil fuels by 2000, and decline after that, 1990 base. 30% reduction of methane emissions from disposal of wastes by 2000, 1990 base
Switzerland	*Stabilization, by the year 2000 of the consumption of fossil fuels and of resulting CO ₂ emissions at their 1990 level, followed by a gradual reduction
United Kingdom	To return each of the main GHGs to 1990 levels by the year 2000

The Intergovernmental Negotiating Committee

The Intergovernmental Negotiating Committee (INC) for the Framework Convention on Climate Change began its work in December of 1990, meeting five times over a period of two years to develop the Convention. Negotiations were difficult, as sharp divisions existed among the countries involved in the negotiations over a tremendous number of issues.²¹ Environmental

²¹Numerous commentators have discussed the sharp divisions among the countries involved in the negotiations over a tremendous number of issues. These included the objectives of the treaty, principles on which action should be based, the gases to be covered, the nature and form of commitments, the extent to which countries can work together in meeting these commitments, the extent to which these commitments apply to developing countries, and financial and technical assistance. The greatest confrontation between the policy beliefs of the Economic Growth and the Precautionary Coalitions, however, occurred over the nature of the treaty itself and the specific commitments for industrialized countries that were to be contained in it. For a general discussion of the climate change negotiations and their context, see, e.g., Bodansky. 1993. *The United Nations Framework Convention on Climate Change: A Commentary*; Victor, David G. and J. E. Salt. 1994. *From Rio to Berlin - Managing Climate-Change*. *Environment* 36, 10: 6+; Reinstein. 1993. *Climate Negotiations*; and Mintzer and Leonard. 1994. *Negotiating Climate Change: The Inside Story of the Rio Convention*. Grubb also provides a fairly thorough discussion of the politics of targets and timetables (Grubb, Michael. 1990. *The Greenhouse Effect: Negotiating Targets*. *International Affairs* 66: 67-72).

groups and the environment ministries of European and AOSIS countries argued strongly for a substantive convention incorporating specific commitments' and implementation measures, in particular a commitment to stabilization at 1990 levels by the year 2000 as a first step, with the Toronto target to apply after that. Developing nations other than the oil-producing states and Eastern European countries also supported this approach as long as they were differentially handled with regard to commitments.²² However, the United States, Russia, OPEC countries, business interests, and other members of the Economic Growth Coalition opposed it. They argued for a process-oriented framework convention that established general obligations concerning such matters as scientific research and cooperation and only a skeletal legal and institutional framework on which future commitments would be built.

Beginning with the first INC meeting and continuing throughout the negotiations, both coalitions attempted to persuade others as to the merits of their positions by distributing articles, study results, and other literature. A particularly effective means of communication used by the Precautionary Coalition was the daily Eco newsletter. The Eco, which environmental NGOs have published at major international environmental conferences since the Stockholm Environment Conference in 1972, contained not only opinion pieces from various NGO representatives but also daily updates on the negotiations. Because it was the only source of information concerning events of the previous day, members of both coalitions came to rely on it to stay current with the discussions.

During the second INC session, Robert Reinstein, the head of the U.S. delegation, Nobutoshi Akao, the head of the Japanese delegation, and Katsuo Seiki of Japan's Ministry of International Trade and Industry, worked together to develop a "Pledge and Review" process, which Japan then introduced.²³ Under this proposal, each country would pledge to meet an emissions goal and develop a plan for doing so, and the international community would be responsible for reviewing these plans and the adequacy of each country's efforts.²⁴ Some European delegations such as France and the United Kingdom supported the idea as a compromise solution.²⁵ However, other delegations, particularly those from developing countries, found it vague, confusing, and an intrusion on national sovereignty. Environmental groups rejected it vehemently, labeling it "Hedge and Retreat." The opposition was such that those delegations supporting the idea in INC 2 withdrew their support in INC 3, although the concept remains embodied in the final language of the Convention.

²² See generally Bodansky. 1993. *The United Nations Framework Convention on Climate Change: A Commentary* and Mintzer and Leonard. 1994. *Negotiating Climate Change: The Inside Story of the Rio Convention*.

²³ Interviews #7 and #25.

²⁴ For a review of the pledge and review concept, see Nitze, William A. 1991. Recommendations for Strengthening Pledge and Review. In *Pledge and Review Processes: Components of a Climate Convention*, ed. Michael Grubb and Nicola Steen. London: Royal Institute of International Affairs Energy and Environmental Programme. The workshop report prepared by Grubb and Steen provides a more detailed examination of review processes contained in other international treaties and some ideas on how these experiences might apply to the FCCC (Grubb, Michael and Nicola Steen, eds. 1991. *Pledge and Review Processes: Components of a Climate Convention*. London: Royal Institute of International Affairs Energy and Environmental Programme).

²⁵ France, on behalf of the European Union, stated at the end of INC 2 that the Convention "should include what has come to be called a pledge and review proposal." Quoted in Dasgupta. 1994. *The Climate Change Negotiations*.

By the start of INC's fifth and final negotiating session in February of 1992, substantial differences remained among the delegations on many issues, but particularly on the issue of industrialized country commitments. Although the OECD countries caucused almost continuously throughout the negotiating session, the United States remained firmly opposed to targets and timetables, and the other industrialized countries could not agree on the exact terms of the proposed targets and timetables. At the end of the two-week session, with the draft Treaty text containing numerous brackets and alternatives, it was decided that the meeting would be suspended for several months to give the Parties to work informally to find some basis for an agreement.

To facilitate these informal talks, the INC chairman scheduled a meeting of the "Extended Bureau," a group of 20-25 key industrialized and developing country delegations, April 15-17 in Paris. Just prior to this meeting, the major industrialized country delegations met under the auspices of the OECD to try to resolve the issue of targets and timetables. Unable to do so, they emerged with two radically different proposals. The first, favored by European countries and environmental groups, required countries to stabilize emissions at 1990 levels by the year 2000. The second, proposed by the United States, simply required parties to adopt policies and measures that "will contribute to the global effort regarding this Convention, recognizing that the reduction of growth of net anthropogenic emissions of the total of all greenhouse gases...would be an appropriate signal that longer-term emissions trends have been modified consistent with that objective."²⁶

During the Extended Bureau meeting, the U.S. delegation delivered an ultimatum to the European delegations, making it clear that that the United States would not agree to a treaty that required countries to stabilize their emissions. The German and U.K. delegations, recognizing that their own constituents would have difficulty accepting a treaty regime that did not include the United States, agreed to compromise. Reinstein; Ansgar Vogel, the head of the German delegation; and David Fisk, the head of the U.K. delegation, drafted language to take back to their capitals after the meeting that they thought would be accepted by both coalitions. To provide the European delegations with a certain amount of "political cover", this draft language was taken to Washington by Michael Howard, the U.K. Environment Minister, for discussion with Robert Zoellick, the U.S. Undersecretary of State for Economic Affairs.²⁷

This compromise consisted two very ambiguous subparagraphs.²⁸ The first establishes a "quasi-target," requiring developed countries to adopt and report on national policies to limit emissions and enhance sinks with the "aim of returning to" 1990 emissions levels.²⁹ The second states that a return by the year 2000 to "earlier" emissions levels would be recognized as a

²⁶ Paragraph VI.2.1. of INC document A/AC.237/18/Rev.4 (April 15, 1992).

²⁷ Interview #7. Department of State, United States. Jan., 1989. See also Pearce, Fred. 1992. US Forces Earth Summit to cut carbon commitment. *New Scientist*, May 9, 1992. pg. 6.

²⁸ For a description of the negotiating history of these paragraphs, see Bodansky. 1993. The United Nations Framework Convention on Climate Change: A Commentary and Reinstein, Robert A. 1993. The Framework Convention on Climate Change: Developed Country Commitments on Greenhouse Gas Emissions. Unpublished article. On file with the author.

²⁹ UNFCCC, Paragraph 4.2 (a). The initial compromise used the term "guideline" rather than "aim". However, Germany requested that "aim" or "goal" be used in order to be more consistent with the negotiating history (Interview #7. Department of State, United States. Jan., 1989).

contribution to a modification of longer-term emissions trends. There is no explicit linkage between the two paragraphs, however. In addition, the proposal called for Parties to provide detailed reports to the Conference of the Parties (COP) on the policies and measures they are being undertaking to meet this goal.

Although many European countries balked at the proposal, President Bush made it clear in phone calls with EC President Jacques Delors, French President Mitterand, Dutch Prime Minister Lubbers and Chancellor Kohl that the United States would not sign the treaty and that he would not attend the Rio meeting unless the compromise language was accepted.³⁰ The European countries capitulated, and the compromise language was introduced when the INC's Fifth Session resumed in June of 1992. This language was ultimately adopted by the negotiators in the final treaty, allowing the Convention to be opened for signature at the 1992 U.N. Conference on Environment and Development in Rio de Janeiro, Brazil.

7.2.2. Phase 2: COP 1 and the Berlin Mandate (1992-1994)

Although members of the Precautionary Coalition, particularly representatives of environmental groups and European and Small Island countries, viewed the final language with its "soft" target as a defeat, they were able to require that the adequacy of these commitments would be reviewed by the COP at its first session.³¹ Delegates also agreed at the last negotiating session to a "prompt start" to the treaty by requiring Annex I countries to prepare and submit their national communications to the Secretariat quickly so that they would be available this review.³² Most nations ratified the Convention quickly, and it entered force in March of 1994.

A critical event that shifted the balance of power between the two coalitions was the election of President Clinton and Vice-President Gore in the fall of 1992. With the change in administration, powerful members of the Economic Growth coalition were removed from both the national and international policy-making process, while members of the Precautionary Coalition, such as Vice-President Gore, gained significant decision-making authority. This allowed the Precautionary Coalition to attempt once again to institute legally-binding targets and timetables.

The INC held six additional sessions after the 1992 adoption of the FCCC in preparation for COP I, which was to be held in the Spring of 1995 in Berlin, Germany. The first two INC sessions, were devoted to various institutional issues, and discussions related to national

³⁰ Gutfeld, R. How Bush Achieved Global Warming Pact with No Timetables. *Wall Street Journal*, May 27, 1992. pg. A1.; Interview #7. Department of State, United States. Jan., 1989. Also see memo in Appendix A.

³¹ Article 4.2.(d). of the Convention requires that the COP at its first session review the adequacy of Articles 4.2(a). and (b). in light of the best available scientific information and assessments of climate change and its impacts, as well as relevant technical, social and economic information.

³² See Resolution INC/FCC/1992/I in A/AC.237/18 (Part II)/Add.1, as well as Borione, Delphine and Jean Ripert. 1994. Exercising Common but Differentiated Responsibility. In *Negotiating Climate Change: The Inside Story of the Rio Convention*, ed. Irving M. Mintzer and J. Amber Leonard. Cambridge: Cambridge University Press; Dowdeswell, Elizabeth and Richard J. Kinley. 1994. Constructive Damage to the Status Quo. In *Negotiating Climate Change: The Inside Story of the Rio Convention*, ed. Irving M. Mintzer and J. Amber Leonard. Cambridge: Cambridge University Press; and Chayes, Antonia H., Eugene B. Skolnikoff, and David G. Victor. 1992. *A Prompt Start: Implementing the Framework Convention on Climate Change*. Cambridge: Harvard Law School/MIT Center for International Studies.

commitments were not initiated until INC 8 (August 16-27, 1993) when the issue of joint implementation (JI) was taken up.³³ Proponents of JI – the United States, Canada, Japan, the Nordic countries, Australia, and New Zealand – argued that the most cost-effective approach to reducing emissions is to undertake mitigation efforts in those countries where it is the least costly to do so.³⁴ Most EU countries, as well as most environmental groups, were opposed to this approach, viewing it as an effort to avoid making difficult choices domestically by shifting the burden to developing countries.³⁵ While not absolutely opposed to Joint Implementation, many of the developing country delegates expressed the view that the language referring to joint implementation was meant to apply only to transactions among Annex I countries.³⁶

The debate on the adequacy of commitments began during INC 9 (February 7-10, 1994), which coincided with the release of a special IPCC report stating that atmospheric concentrations would continue to rise for at least two centuries even if current CO₂ emissions were stabilized at the global level.³⁷ The FCCC Secretariat also distributed at INC 9 an analysis of the first 15 national communications of industrialized countries that indicated that the actions being taken by most of these countries would be insufficient to reduce GHG emissions to 1990 levels. In response to these reports, delegates from the United States, the EU and its member states, and many developing countries suggested that a review could only conclude that the commitments in article 4.2.a and 4.2.b are inadequate and need to be strengthened.³⁸ Environmental NGOs went further, issuing a statement calling for the adoption at COP I of the Toronto Conference target and stating that this target is the minimum first step towards reaching the objective of the Convention. However, Australia and Japan, both of which were dominated by the Economic Growth coalition, did not clearly state at this point that the commitments were clearly inadequate, and no further progress was made during the next two negotiating sessions.

In an effort to force the issue, AOSIS, with support from a number of environmental groups, introduced in INC 11 (February 6-17, 1995) a draft protocol that call for Annex I countries to reduce their CO₂ emissions by 2005 to a level of at least 20 percent below that of 1990. Germany, under pressure to take a leadership role in crafting further commitments, proposed

³³ Article 4.2.a of the Convention states that Annex I countries may implement policies and measures “jointly” but does not define how this might be done.

³⁴ See, e.g., Kjellen, Bo. 1994. A Personal Assessment. In *Negotiating Climate Change: The Inside Story of the Rio Convention*, ed. Irving M. Mintzer and J. Amber Leonard. Cambridge: Cambridge University Press; Wirl, F., C. Huber, and I. O. Walker. 1998. Joint implementation: Strategic reactions and possible remedies. *Environmental & Resource Economics* 12, 2: 203-224 for a further discussion of Joint Implementation issues.

³⁵ Opposition among developing countries was such that Ambassador Estrada, the INC Chairman, made a very unusual statement from the chair on behalf of Argentina, stating that JI will allow those who have the money to continue to do as they like (ECO Newsletter, INC 8, #5).

³⁶ The G77 also drew a strong distinction between the use of Joint Implementation of “cooperation” and its use for “credit,” arguing that JI could be used in conjunction with additional post-2000 commitments, but should not be used to meet the year 2000 commitments. Mexico, which was participating in a joint emissions reduction project with Norway, broke with the G-77 during INC 8 by supporting the concept of JI among developed and developing countries. Argentina and Colombia indicated support for this during INC 10, and it was ultimately agreed that a ‘pilot phase’ be initiated.

³⁷ IPCC 1994.

³⁸ The most common reason given was that these paragraphs relates only to the end of the century and say nothing specific about the ensuing time period. (ECO Newsletter, INC 9, Issue #2).

specific language for this Protocol, suggesting Annex I Parties commit to stabilizing emissions at 1990 levels by the year 2000, and that these Parties "...commit themselves to reducing their CO2 emissions by the year (x) individually or jointly by (y)%." It did not, however, suggest specific numbers and dates to replace (x) and (y). The United States, while not making specific proposals, called for a "new post-2000 aim" and proposed "common actions" by Annex 1 parties. Oil-producing countries, in particular Saudi Arabia, Kuwait, Iran, and Venezuela, argued against further negotiations, saying they felt existing commitments by developed countries must be met first before addressing the question of adequacy.

Heated debate also ensued regarding the scope of any new commitments. The German proposal included a provision that would work toward further reporting commitments for non-Annex I countries, as well as "commitments to limit the rise of emissions in the case of certain more advanced developing countries." The United States called for "broader leadership" in efforts to combat climate change by differentiating among non-Annex I countries and promoting new efforts by the more "advanced" developing countries to limit their greenhouse gas emissions. The G-77 countries, however, vehemently objected to this, arguing that any review of paragraphs 4.2.a & b, and any further commitments based on this review, should be restricted to Annex I parties.

These debates were ultimately resolved during COP I in April of 1995. Environmental NGOs invested tremendous effort to broker a compromise among members of the G-77 and the EU. The host country, Germany, together with other EU member States, cleared the way for progress by clarifying that they would not require developing country commitments to be on the agenda of protocol negotiations.³⁹ A so-called "Green Group" of developing countries, led by India and comprised of most other G-77 countries except for the OPEC countries, therefore agreed that negotiations should begin to strengthen the commitment of Annex I countries.

Finally, with the Clinton Administration publicly supporting a commitment to stabilizing emissions by the year 2000, the United States joined other countries in concluding that the specific commitments contained in the FCCC were inadequate to meet the Convention's objectives, and that additional commitments were necessary. The Parties at the COP agreed to begin a process that would strengthen the commitments for Annex I parties for the period after 2000. These strengthened commitments were to include "quantified limitation and reduction objectives within specified time-frames..." i.e., targets and timetables. This "Berlin Mandate" was to be carried out by an "open-ended ad hoc group of Parties," which became known as the Ad Hoc Group on the Berlin Mandate (AGBM), and was to be completed in time for adoption at COP 3 in 1997.

7.2.3. Phase 3: COP III and the Kyoto Protocol (1994-1997)

The AGBM met eight times between COP 1 and COP 3. The range of issues that Parties needed to resolve in a relatively short period of time were substantial, including:

- Whether the "quantified limitation and reduction objectives" would be legally-binding;
- The strength and timing of these targets and timetables;

³⁹ To facilitate this agreement, Germany hosted in March an informal Ministerial meeting of 16 key developed and developing countries. It was at this meeting that an informal agreement was reached on the 1997 deadline (1995. EU to Push for Coordinated Measures in Climate Protocol. *Environment Watch Western Europe*, Mar. 17, 1995.).

- Whether or not different targets would apply to different countries;
- Whether specific targets would be developed for each GHG or a single target would apply to all GHGs as a group; and,
- The extent to which “flexibility mechanisms,” such as JI and emissions trading, could be used to meet targets;

Although the Precautionary Coalition now dominated the policy-making process in the United States and most other industrialized countries, the Economic Growth coalition was still able to exert sufficient influence in Japan, the United States, Switzerland, Canada, Australia, Norway, and New Zealand, which collectively became known as the JUSSCANZ group. In particular, the Economic Growth coalition was able to demand that, for the sake of equity, developing countries also take on additional commitments, although this was beyond the scope of the Berlin Mandate. In addition, these countries took the position that a detailed analysis and assessment of policies and measures (PAMs) was necessary before negotiations could commence on specific targets and timetables, and that negotiations should not start until after the IPCC released its second assessment report at end of 1995.

When the IPCC's Second Assessment stated that “the balance of the evidence suggests that there is a discernible human influence on global climate,” the United States reversed its position, announcing at AGBM 3 in the spring of 1996 that negotiations regarding specific targets should begin.⁴⁰ Germany, supported by some other EU countries, immediately proposed that industrialized countries should reduce 1990 levels of CO₂ by 10 percent by 2005 and 15-20 percent by 2010.⁴¹ Australia, Russia, and the OPEC countries refused to accept the SAR as a basis for further negotiations, however, arguing that the prevailing uncertainties did not justify doing so.

The Precautionary Coalition within the United States continued to exert its position regarding targets and timetables during COP 2 (July, 1996 in Geneva) when U.S. Under-Secretary of State Timothy Wirth called for intensified international negotiations on a “realistic, verifiable and binding medium-term emission target.”⁴² Although Australia, Russia, and the OPEC countries continued to oppose the use of the SAR as the scientific basis for the development of legally-binding targets and timetables, the change in the U.S. position enabled agreement on the Geneva Ministerial Declaration, which called for Parties to accelerate negotiations of legally-binding protocol or another legal instrument that includes commitments for Annex I Parties regarding “quantified legally-binding objectives for emission limitations and significant overall reductions within specified time-frames...”⁴³

No proposals for specific targets and timetables were put forward until AGBM 6, in March 1997. At this session, the Netherlands, speaking on behalf of the EU, proposed that the combined emissions of CO₂, CH₄, and N₂O in industrialized countries should be cut by 15

⁴⁰IPCC. 1995. *IPCC Second Assessment Synthesis of Scientific-Technical Information Relevant to Interpreting Article of the UN Framework Convention on Climate Change*. Geneva: IPCC.

⁴¹ There was a substantial debate within the EU, however, as to whether targets should be derived from PAMs or vice-versa, as well as whether there should be differentiated targets within the EU. See FCCC/AGBM/1996/5 and Earth Negotiations Bulletin Vol. 12, No. 27, March 11, 1996, for reports of AGBM 3.

⁴² Speech by Timothy Wirth, Under Secretary of State for Global Affairs, on file with the author.

⁴³ See FCCC/CP/1996/15 and Earth Negotiations Bulletin, Vol. 12, No. 38, July 22, 1996, for a more detailed account of COP 2.

percent by 2010. To resolve substantial struggles within the EU as to differentiation, the EU developed an internal burden-sharing agreement, or "bubble," in which this target would be applied to the EU as a whole, but countries within the EU would have different targets.

The United States and other JUSSCANZ countries were more concerned at this point with finding ways to ensure that countries would have flexibility in how they meet their commitments. As part of this effort, the United States introduced a "Draft Protocol Framework" that included 5-year emission budgets, JI, emissions trading, and the borrowing of emissions "units" from one period to the next.⁴⁴ The United States and other JUSSCANZ countries also continued to push for additional developing country commitments, with the United States proposing that the Protocol contain an "Annex B" list of countries without legally-binding targets that would voluntarily adopt emission limitations, and that commitments for all Parties should be agreed by 2005. Developing countries firmly rejected this proposal, however.

At AGBM 7, the EU modified its initial proposal by suggesting an intermediate cut of GHG emissions of industrialized countries by 7.5 percent of 1990 levels by 2005. At AGBM 8, Japan proposed a formula for differentiated emission reduction targets up to 5 percent for CO₂, N₂O, and CH₄ collectively (i.e., a "basket approach"). The G-77 and China tabled a proposal that called for industrialized countries to reduce CO₂, CH₄, and N₂O by 7.5 percent by 2005, 15 percent by 2010, and 35 percent by 2020, in essence supporting the EU position.⁴⁵ The United States also expanded on its draft protocol framework at AGBM 8 by proposing that emissions of CO₂, CH₄, N₂O, HFCs, PFCs, and SF₆ collectively be returned to 1990 levels in the budget period 2008-2012, with all countries required to meet the same target. However, Parties would be able to use JI and emissions trading and borrow from subsequent budget periods in order to meet their commitments. It also said that it would not assume binding obligations "unless key developing nations meaningfully participate" in the effort.⁴⁶ Little common ground could be found among these competing proposals, however, and AGBM 8, the last negotiating session before COP 3, ended without agreement.

In the months prior to COP 3, a number of countries, concerned that COP 3 would end in failure, began intensive informal talks, both multilaterally and bilaterally. Although most of these efforts were unsuccessful, some resulted in slight forward movement.⁴⁷ For example, during a tour of Latin America in October of 1997, President Clinton was able to persuade Argentinean President Menem to issue a statement acknowledging that any meaningful solution to the problem of global warming had to address the question of developing countries emission limits. In November of 1997, during a visit to Saudi Arabia by Prime Minister Hashimoto of

⁴⁴ See FCCC/ABGM/1997/MISC.1.

⁴⁵ To gain the support of OPEC countries, the proposal also called for the establishment of a Compensation Fund that would compensate those developing countries adversely affected by efforts by industrialized countries to reduce emissions. See FCCC/ABGM/MISC.1/Add. 6, 8, and 10.

⁴⁶ Remarks by the President on Global Climate Change, National Geographic Society, Washington, D.C. October 22, 1997, on file with the author.

⁴⁷ For example, German environment minister Angela Merkel visited China and Japan in August of 1997, while other high-level environmental officials met with their counterparts from Saudi Arabia, Russia, and other eastern European countries. In November of 1997, the EU environment commissioner and the environment ministers of Luxembourg, the Netherlands, and the United Kingdom met with chief US negotiators, and the U.K. Environment Minister John Prescott held talks with Australia and New Zealand.

Japan, Crown Prince Abdullah promised that Saudi Arabia would provide constructive cooperation at Kyoto.⁴⁸ At the same time, Japan host an informal meeting for Environment Ministers of key countries at which the participants agreed that industrialized countries should meet legally binding targets expressed in budget periods of up to five years. Brazil and the United States also developed a common understanding at the meeting regarding a mechanism for cooperation between developing countries and industrialized countries, which was to evolve into the Clean Development Mechanism.

Despite these efforts, there were considerable differences among the Parties on most of the critical issues when COP 3 began. The main meeting of the COP was held on Dec 1-7, 1997, followed by a high-level ministerial segment on Dec 8-10. Among the unresolved issues were:

- The size, timing, and design of emission limits;
- The number of gases covered by these limits;
- Whether or not all countries would be required to meet the same target;
- Whether and to what extent sinks would count towards emission reduction targets
- How developing countries would be involved; and,
- Whether and to what extent JI, emissions trading, and the EU bubble would be allowed.

Although the United States changed its position on differentiation during the first week of COP 3, most of the remaining issues were still unresolved when the Ministerial segment began, at which point the United States, the European Union, and Japan began intensive trilateral discussions regarding the exact size of the targets to be adopted in the hope that a resolution on this issue could help resolve negotiations on sinks, emissions trading, and joint implementation.

On Monday, December 7, Vice-President Gore made a quick appearance in Kyoto to try to break the impasse. Before he departed, he announced that he had instructed the U.S. negotiators to "show increased flexibility" in reaching an agreement. This helped break the logjam. Stuart Eizenstat, the lead negotiator for the United States, agreed that night to accept more aggressive cuts in emissions, and other countries responded with similar concessions

By December 9, the basic framework for an agreement began to take shape, with agreement having been reached on a number of issues, including differentiated targets for the commitment period 2006-2010; joint implementation between industrialized countries, including the EU "bubble"; and the inclusion of some categories of sinks. However, agreement had not yet been reached on the exact size of the targets, the number of gases involved, emissions trading, and developing country involvement.

This final impasse was broken during a five-hour meeting late in the evening of the 9th after United States finally retreated from its insistence on a mechanism to bring developing countries gradually into the protocol. Japan then agreed to accept an emissions target significantly higher than what negotiators had said was Japan's bottom line. After 24 hours of intense negotiations both in Kyoto and among capitals, an agreement was reached on targets of 8 percent, 7 percent,

⁴⁸ In return, Hashimoto agreed to launch negotiations on an investment protection agreement to boost Japanese investment in Saudi Arabia and to look at ways to increase Saudi oil imports. "Fahd appears to favor renewing oil concessions in talks with Hashimoto", Daily Yomiuri, November 17, 1997.

and 6 percent below 1990 levels for the EU, the United States, and Japan. Japan and the United States were also able to force the EU to accept emissions trading as part of the package, and the draft text also contained a provision for "voluntary commitments" by developing countries.⁴⁹

The targets for the remaining countries (Table 7.7) were the result of "voluntary pledges" made by each country.⁵⁰ Although justified on basis of "special situations," the numbers were not based in science or negotiation, but were set by each negotiator's estimate of what domestic constituencies would tolerate. A certain amount of "gamesmanship" among these countries also took place once the EU, Japan, and the United States reached an agreement on their targets, with a number of countries backing away from the targets to which they had agreed only a day earlier. For example, during the closing hours of the negotiations, Russia and the Ukraine rejected the 5 percent reduction that had been acceptable only two days earlier, refusing to go beyond stabilization. The EU target had been proposed for most of the Eastern European countries, as they were expected to join the European Union with a few years. However, Hungary and Poland rejected this after the targets for Russia and Ukraine were changed. The EU, Japan, and the United States did little to counter these shifts, however, as they did not want to alienate other countries and put their own fragile agreement at risk.

The final adoption of the Protocol began at 1 am in the morning of December 11, 1997, even though the final numbers for industrialized country targets had not yet been released. The

Table 7.7 Proposed Targets for Annex I Countries as of December 9, 1997

Country or Country Group	Target
EU and other European countries	8% below 1990 levels
New Zealand	Stabilization
Russia	5% below 1990 levels
Ukraine	5% below 1990 levels
United States	5% below 1990 levels
Canada	5% below 1990 levels
Japan	4.5% below 1990 levels
Norway	5% above 1990 levels

process soon came close to collapsing once again when the G-77 and China, which had not been a participant in the final negotiations regarding the targets, rejected the provisions on emissions trading. Without these provisions, however, the United States and Japan would not sign on to the agreement. The developing countries eventually agreed to allow the principle of emissions trading to stand while putting off for a year discussions regarding the details of its

⁴⁹ Interview #1. Department of State, United States. Dec., 1998; Warrick, Joby. 1997. Pact Rescued in Final Hours: Turbulence Pervaded First round of Greenhouse Gas Talks. *Washington Post*, Dec. 13, 1997. A pg. 1.

⁵⁰ Oberthur, S. and H. Ott. 1999. *The Kyoto Protocol: International Climate Policy for the 21st Century*. Berlin: Springer-Verlag.

implementation. In exchange, however, they were able to win the removal of the section on "voluntary commitments."⁵¹

⁵¹ Sullivan, Kevin and Joby Warrick. Weary Delegates Set Emissions Cuts for Developed Nations. *Washington Post*, Dec. 11, 1997. A pg. 1.

CHAPTER 8 - U.S. CLIMATE POLICY DEVELOPMENT AND IMPLEMENTATION

8.1 INTRODUCTION

U.S. climate change policy between 1988 and 1997 was determined in the U.S. Climate Policy Subsystem. Within this subsystem, U.S. climate change policy was developed in three phases. The first phase, from 1988 to mid-1992, resulted in the release of the policy paper "U.S. Views on Global Climate Change" at INC5 and agreement on the Framework Convention on Climate Change. The second, from mid-1992 to late 1993, resulted in the first U.S. Climate Change Action Plan. The third phase took place from late 1993 to late 1997, and resulted in the 2nd U.S. Climate Action Report and agreement on the Kyoto Protocol.

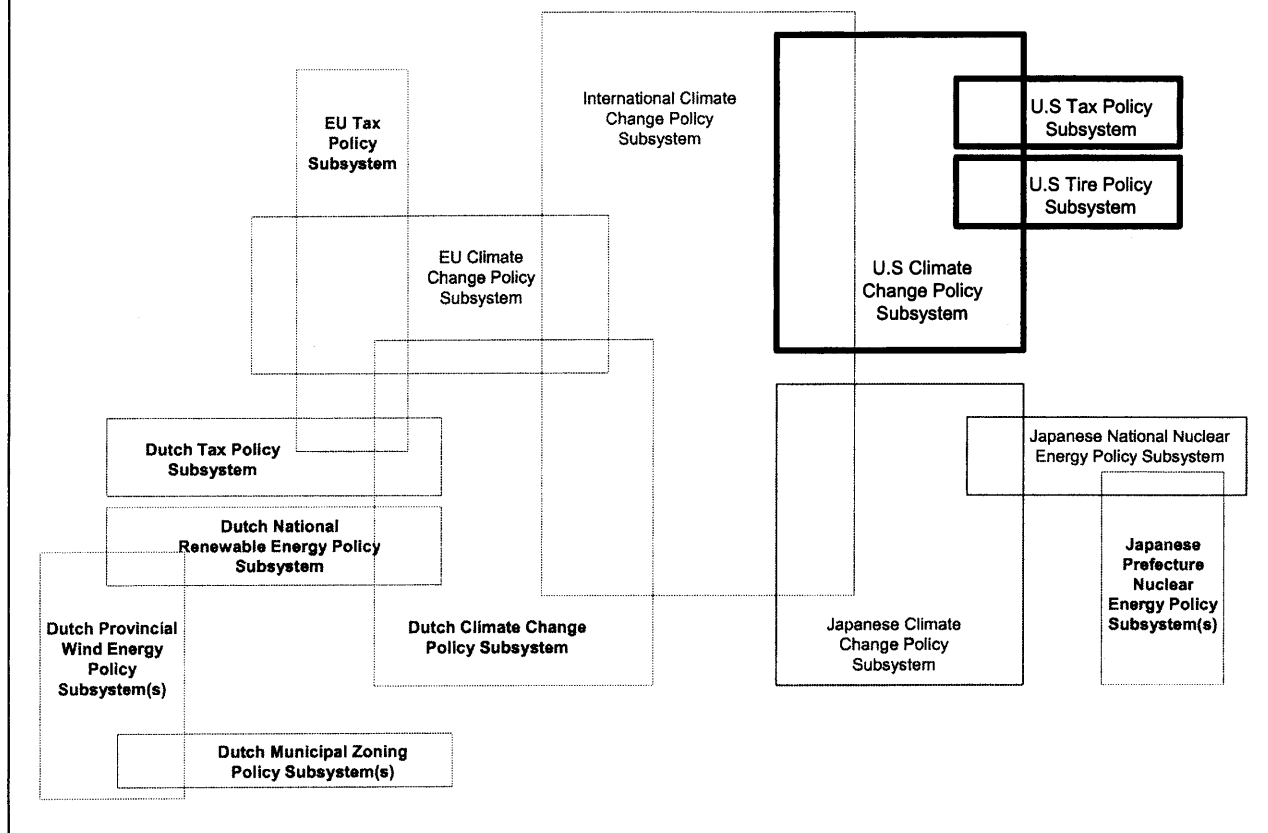
The 1993 U.S. Climate Change Action Plan, the policy output of the second phase of the U.S. climate policy subsystem, described almost 50 measures covering a wide variety of activities that would reduce U.S. GHG emissions. Despite this plan, U.S. emissions of GHGs continued to rise, and, by 1997, it had become clear that emissions of GHGs at the end of the decade would be at least 13 percent above 1990 levels.¹ The U.S. failure to meet the goal of reducing U.S. emissions to their 1990 levels by the year 2000 that President Clinton announced in May of 1993 has been attributed to several causes, including an unexpectedly high rate of economic growth and low fuel prices. However, it can also be attributed to a failure of implementation. In some cases, it failed to persuade Congress to pass legislation necessary to implement a number of measures, such as an energy tax and the removal of a tax break for employers that subsidize parking spaces for their employees. Although the energy tax was not included in the 1993 Action Plan, Congress also blocked the implementation of a number of measures that were included in the plan. For example, Congress cut substantially financing for energy conservation measures, and temporarily blocked the Energy Department from issuing new energy efficiency standards for household appliances. It also blocked efforts to require energy-efficiency labels on care tires. The Energy Department itself failed to issue new efficiency standards for electrical distribution transformers on power lines, while forestry agencies missed to goals for planting trees.²

The remainder of this chapter will describe the dynamics of the U.S. Climate Policy Subsystem between 1988 and 1997 and three overlapping subsystems: U.S. tire regulation subsystem, the U.S. Green Lights policy subsystem and the U.S. tax policy subsystem (Figure 8.1). They provide good examples of the dynamics that occur among and within overlapping subsystems to implement an international agreement in a country in which social forces are more developed, public institutions are fragmented, and power is distributed among a number of agencies and institutions.

¹ Ellis, Jane and Karen Treanton. 1997. Recent trends in energy-related CO₂ emissions. *Energy Policy* 26: 685-96; Stone, Peter. 1997. The Heat's On. *National Journal*, July 26, 1997. pg. 1595.

² Cushman, John H. Why the U.S. Fell Short of Ambitious Goals for Reducing Greenhouse Gases. *New York Times*, Oct. 20, 1997. pg. A15.

Figure 8.1 The U.S. Climate Policy Subsystem and selected overlapping policy subsystems



8.2 THE U.S. CLIMATE POLICY SUBSYSTEM

Like the International Climate Policy Subsystem, each of the three phases of the U.S. climate policy subsystems involved two competing coalitions: an Economic Growth Coalition and a Precautionary Coalition. The Economic Growth Coalition largely dominated the first phase, while the Precautionary Coalition was able to dominate the second and third phases. In the latter two phases, however, the Economic Growth coalition maintained a substantial amount of strength, particularly within Congress, and was able to prevent the Precautionary Coalition from achieving many of their policy goals.

8.2.1. Phase I: 1988-1992

The first phase of the U.S. climate policy process started in late 1987 after the Montreal Protocol was signed. Scientific agencies such as EPA, NASA, NOAA, and NSF had been contributing significant resources to both domestic and international science programs on climate change, and produced a number of different reports detailing both the causes of climate change and its impacts.³ Following the completion of the Montreal Protocol, members of the

³ See, e.g., National Academy of Sciences. 1975. *Understanding Climatic Change, A Program for Action*. Washington, DC: National Academy of Sciences; Geophysical Research Board. 1977. *Energy and Climate*. Washington, D.C.: National Academy of Sciences; Council on Environmental Quality. 1981. *Global Energy*

precautionary coalition began arguing that work on a climate treaty should begin immediately. Initially, their primary opposition came from DOE's Carbon Dioxide Research Division, which argued that more research was needed.⁴ However, the Reagan White House quickly became involved, taking control of issue away from State and EPA, gave lead to White House Domestic Policy Council's Working Group on Energy, Natural Resources, and Environment (ENRE).⁵ Working under the auspices of ENRE, the two coalitions eventually reached agreement on a proposal for the creation of the IPCC.⁶ When the IPCC was formed under the auspices of UNEP and the WMO, the United States assumed the chairmanship of Working Group III, the Response Options working group.

EPA and the State Department received considerable support from members of Congress, particularly Senators Al Gore and Tim Wirth. With the leadership of these two senators, Congress passed the 1987 Global Climate Protection Act, which was attached to the FY1988-89 foreign aid bill. The Act designated EPA as the lead agency for the development of national policy options and the State Department for coordinating foreign policy in order to "obtain international participation in addressing the problems of global climate change."⁷ While the State Department was able to establish an interagency Policy Coordinating Committee (PCC) to address international climate change issues, other executive branch agencies, particularly the Office of Management and Budget and the Departments of Interior, Energy and Commerce, successfully resisted EPA's efforts to coordinate the development of a domestic policy.⁸

Climate change began to receive considerable public attention during the summer of 1988, when the United States experienced one of its hottest summers in decades.⁹ Campaigning for the Presidency, Vice-President Bush attempted to separate himself from the Reagan Administration by stating publicly that he would support international action on climate change and that he

Futures and the Carbon Dioxide Problem. Washington, D.C.: U.S. Government Printing Office; U.S.Environmental Protection Agency. 1983. *Can We Delay A Greenhouse Warming?* Washington, D.C.: U.S. Environmental Protection Agency; and U.S.Environmental Protection Agency. 1988. *The Potential Effects of Global Climate Change on the United States: Report to Congress.* Washington, D.C.: U.S. Government Printing Office..

⁴ Interview #18. Environmental Protection Agency, United States. Mar., 1998.

⁵ ENRE was not involved in international environmental issues until the Departments of Commerce and Interior and other domestic agencies became aware of the potential impact on U.S. industry of the reductions in CFC production and consumption being proposed by U.S. negotiators under the Montreal Protocol (Interview #6. The Climate Council, United States. Jan., 1998).

⁶ Hecht and Tirpak. 1995. *Framework Agreement on Climate Change: A Scientific and Policy History.* For some, the IPCC was seen as one means of addressing the scientific uncertainties. For others, it was viewed as a means to slow down international movement towards a convention.

⁷ Public Law 100-204. Although federal activities regarding climate change had been coordinated by NOAA's National Climate Program Office since 1978, this office was largely regarded as ineffective, and ceased to exist after 1989.

⁸ Nitze. 1991. *Improving U.S. Interagency Coordination of International Environmental Policy Development.*

⁹ In June, 1999, NASA physicist James Hansen declared at Senate Energy Committee hearing that "99 percent certainty" that global warming "is here" (Weisskoff, Michael. 1988. 'Greenhouse Effect' Fueling Policy Makers. *Washington Post*, Aug. 15, 1988. 1 pg. 13). In October of that year, EPA released report on impacts of climate change that stated that the cost of protecting major U.S. cities from climate change could reach 111 billion dollars by the year 2100.

would hold high-level meeting on global warming during his first year in office.¹⁰ He was elected President that November, and took office in January of 1989. During the first six months of his administration, however, John Sununu, his chief of staff and most other high-level officials were too engaged in managing the transition between the two administrations to focus on the climate change issue. This left the precautionary coalition from the State Department and EPA in control of U.S. climate policy.¹¹

Although the economic growth coalition began to regain control of the policy process during the following year, a series of highly public missteps forced it to fulfill President Bush's campaign pledge to host a global workshop in the fall to identify and address the issues required to start negotiations on treaty.¹² With this publicity, industry representatives started to become more active in the economic growth coalition. In June of 1989, sixteen trade associations formed Global Climate Coalition, which was to become the principal voice of industry on the issue.¹³ The promised meeting, however, did not materialize for another year.

The Bush administration again faced pressure to commit to emissions reductions in November at the Noordwijk conference on climate change. Despite intense preparatory work by the conference organizers and EPA, the United States rejected a conference statement in which the participating governments agreed to stabilizing emissions at 1990 levels by the year 2000.¹⁴ With polls showing that more than 70 percent of Americans thought that the United

¹⁰ During his campaign, Bush stated that "Those who think we're powerless to do anything about the 'greenhouse effect' are forgetting about the 'White House effect.' As president, I intend to do something about it." (Balzar, John. Bush vows 'zero tolerance' of environmental polluters. *Los Angeles Times*, Sept. 1, 1988. 1 pg. 1).

¹¹ An example of this can be seen in Secretary of State James Baker's speech at the first meeting of IPCC WG III in January 1989, when he said, "We can probably not afford to wait until all the uncertainties have been resolved before we do act. Time will not make the problem go away." In the spring of 1989, the National Security Council (NSC) Policy Coordinating Committee on Oceans, Environment and Science (PCC/OES) took over coordination of international environmental policy positions from ENRE as part of a reorganization of the NSC. Chaired by State Department Assistant Secretary of State Fred Bernthal, the PCC/OES had representation from all domestic and national security agencies. A Working Group on Climate Change was created under the PCC/OES that was chaired by Deputy Assistant Secretary of State Bill Nitze. Both of these individuals were important members of the precautionary coalition in the State Department.

¹² In May of 1989, Sununu and Darman rejected a request by EPA Administration Bill Reilly for permission to announce at IPCC WGIII workshop that the United States would support the development of an international convention on climate change (Weisskoff, Michael. 1989. Sununu blocked plan to seek convention on global warming. *Washington Post*, May 6, 1989. pg. A2). At this same time, Darman's Office of Management and Budget forced James Hansen to tone down testimony he was to give before the Senate Commerce subcommittee on science, technology and space (Peterson, Cass. Experts, OMB spar on Global Warming. *Washington Post*, May 9, 1989. pg. A1). See also Weisskoff, Michael. 1992. Bush Was Aloof in Warming Debate. *Washington Post*, Oct. 31, 1992. A pg. 1; Weisskoff, Michael. 1989. U.S. Commits to talks on 'Greenhouse'. *Washington Post*, May 13, 1989. pg. A1.

¹³ Companies included Electricity Consumers Resource Council, Edison Electric Institute, U.S. Chamber of Commerce, American Paper Institute, National Coal Association, National Association of Manufacturers, and others.

¹⁴ VROM had been working with EPA on preparations for the meeting, and had invited the EPA administrator to attend (Interview #53. Ministry of Housing, Spatial Planning and the Environment, Netherlands. Jan., 1998). Several weeks prior to the meeting, Reilly, supported by Baker, asked the PCC to support an announcement that the United States would stabilize CO2 emissions at present level and would host an international conference following year to start negotiations. The PCC, led by Sununu and Darman, rejected these proposals. Sununu, Darman, and most other members of the DPC also wanted to prevent Reilly from attending the meeting, but

States should take action against climate change, the White House was finally forced to drop its resistance to negotiations on a climate treaty soon after the meeting.¹⁵

This change was also due in part to a softening in views by Bromley and Secretary of Energy Watkins. Soon afterward the Noordwijk meeting, the White House transferred the responsibility for coordinating domestic policy on climate change to a special White House Working Group on Climate Change that was chaired by Bromley (the “Bromley Group”). Bromley, a nuclear physicist from Yale who had substantial influence over Bush on scientific issues, used this position to become more familiar with the issue, and agreed with Reilly and Baker that negotiations should begin.¹⁶ At his recommendation, President Bush announced at a summit meeting with Soviet President Mikhail Gorbachev in December that the United States would host a conference in the fall to prepare for negotiations of a framework convention on climate change. Bush also announced plans for an international meeting in the spring at the White House for top-level scientific, environmental and economic officials on global climate issues.

In January of 1990, Sununu and others in the economic growth coalition sought to strengthen its control of the State Department by replacing several key individuals.¹⁷ Robert Reinstein became the point person within the State Department on climate change issues. Secretary of State Baker, who had been an ally of Reilly, recused himself from the issue and handed responsibility for it to Robert Zoellick, the State Department counselor.¹⁸ However, Reinstein reported directly to the White House rather than to Zoellick.¹⁹

Despite committing additional missteps during the spring of 1990, President Bush and other members of the economic growth coalition continued to refuse additional commitments on climate change.²⁰ To fulfill its pledge of the previous spring, the White House held a Conference

acquiesced after it was agreed that Bromley would lead the delegation (Frankel, Glen. U.S. Moves To Block Pact On Emissions. *Washington Post* pg. A1).

¹⁵ Schwartz, Maralee. Warming to the idea of leadership. *Washington Post*, Dec. 6, 89 A.D. pg. A10.

¹⁶ Bromley reportedly spent the six weeks after the Noordwijk issue meeting with a wide range of scientists (Dolan, Maura and Rudy Abramson. Politics, Science shift bush stand on global warming. *Los Angeles Times*, Dec. 5, 1989. A pg. 1; Chen, Edwin. Scientists find a new home at the white house. *Los Angeles Times*, Dec. 18, 1989. B pg. 3).

¹⁷ Curtis Bohlen, the senior vice president of the World Wildlife Fund, replaced Fred Bernthal, who was transferred to the National Science Foundation. Bohlen immediately recused himself on the issue, citing potential conflicts of interest with holdings in the oil industry. Bill Nitze, who was viewed by Sununu as being too aggressive, was fired (Holden, Constance. 1990. Environmentalist Shakeup at state. *Science* 247, 4941: 407; Weisskoff. 1992. Bush Was Aloof in Warming Debate).

¹⁸ Weisskoff, Michael. 1990. Baker Sitting Out Global Warming Debate. *Washington Post*, Nov. 9, 1990. pg. A25; Weisskoff. 1992. Bush Was Aloof in Warming Debate.

¹⁹ Interview #7. Department of State, United States. Jan., 2005.

²⁰ For example, speaking at the third meeting of the IPCC in February of 1990, President Bush called for more research before specific commitments are made to reduce emissions, stating, “Our policies must be consistent with economic growth” and complained that in some areas of the debate, “politics and opinion have outpaced the science (McNulty, Timothy. Bush links economics to environmental answers. *Chicago Tribune*, Feb. 6, 1990. 1 pg. 3). A public furor quickly arose regarding the speech, which was rewritten by Sununu and Darman after they found the first draft, written by Reilly, Watkins, and a few others, too strong. On a television news show, Sununu acknowledged revising the speech to make it “more reflective of administration policy,” and said, “There’s a little tendency by some of the faceless bureaucrats on the environmental side to try and create a policy in this country that cuts off our use of coal, oil and natural gas. I don’t think America wants not to be able to use their

on Science and Economic Research Related to Global Change in April of 1990. In his opening speech, Bush stated that actions “already justified on economic and other grounds” should be taken.²¹ However, the Administration suffered considerable embarrassment when participants, particularly those from Europe, sharply criticized the conference as focusing on research instead of action, and the Administration was forced to state clearly that research is not a substitute for action.²²

Through the remainder of the year, the two coalitions pursued various strategies to put forward their views. At the G-7 summit in Houston in July, European leaders, particularly Chancellor Kohl of Germany, pressured Bush to agree to a statement committing to stabilizing emissions of greenhouse gas emissions, while environmental NGOs embarrassed the administration by releasing “environmental scorecard” that placed United States far behind other countries on protecting the environment.²³ In October, Democratic and Republican Senators had sent letters urging action on climate change at the upcoming Second World Climate Conference.²⁴ On the other side, members of the economic growth coalition also pursued their agenda, arguing that the uncertainties were too great to warrant immediate action.²⁵ At the Second World Climate Conference in November, the United States again refused to commit to a declaration that again called for the stabilization of emissions at 1990 levels by the year 2000.²⁶

automobiles.” (Engleberg, Stephen. Sununu says he revised speech on global warming. *New York Times*, Feb. 5, 1990. A pg. 15). According to White House Press Secretary Marlin Fitzwater, the speech was intended to signal “...a call to research” rather than “a call to action.” (Dumanski, Dianne. An ‘environmental president’ backpedals on acid rain. *Boston Globe*, Feb. 11, 1990. pg. 16).

²¹ Sununu was deeply involved in the planning of this workshop, including choosing speakers, editing press releases and demanding hourly reports. (Weisskoff. 1992. *Bush Was Aloof in Warming Debate*).

²² Atlas, Terry. U.S. rebuffed at talks on global warming. *Chicago Tribune*, Apr. 19, 1990. News pg. 11. The Administration was also embarrassed by leak of talking points highlighting skepticism of issue. For example, among the points listed under “debates to avoid” was the statement that it was “not beneficial to discuss whether there is or is not” global warming or how much or how little warming. It stated that, in the eyes of the public, “we will lose this debate. A better approach is to raise the many uncertainties that need to be better understood on this issue.” (Shabecoff, Philip. Bush Denies Putting Off Action On Averting Global Climate Shift. *New York Times*, Apr. 18, 1990. B pg. 4.).

²³ Beamish, Rita. U.S. Remains on Hot Seat in Environmental Dispute. *Associated Press*, July 10, 1990.; Pine, Art. High Noon In Houston? White House Fears Confrontation. *Los Angeles Times*, June 5, 1989. H pg. 8; Suro, Roberto. Bush defends blocking Kohl environment plan., July 12, 1990. A pg. 14.

²⁴ Dumanski, Dianne. US seen stalling effort to end global warming. *Boston Globe*, Nov. 1, 1989. National/Foreign pg. 1.

²⁵ For example, in May of 1990, an economic assessment of potential U.S. policy responses to global climate change funded by the GCC and the Electric Power Research Institute suggested that such responses could cause a significant drop in U.S. GDP. This effort was undertaken at the prompting of representatives in the Department of Commerce and the International Trade Administration, who felt that previous analyses had underestimated these costs (Interview #15. Department of Commerce, United States. Jan., 1998). That December, the White House Council of Economic Advisors issued a report stating that economic costs to deal with climate change could be “\$800 billion under optimistic scenarios of available fuel substitutes and increasing energy efficiency to \$3.6 trillion under pessimistic scenarios between now and 2010.”

²⁶ Notably, the U.S. delegation to the conference was headed by John Knauss, the head of NOAA, rather than Bill Reilly, serving to maintain the administration’s emphasis on research.

The Administration also resisted efforts by members of the precautionary coalition in Congress to address climate change as part of the reauthorization of the Clean Air Act.²⁷

Negotiations for a framework convention on climate change began in February of 1991 with the United States hosting the first U.N. International Negotiating Committee session in Chantilly Virginia, a suburb of Washington, D.C.²⁸ At this first meeting, the administration released “America’s Climate Change Strategy: An Action Agenda” that highlighted comprehensive actions that the United States was taking had already planned or proposed that would hold U.S. net greenhouse gas emission in the year 2000 to below 1987 levels.²⁹

As negotiations progressed through 1991, Sununu and others in the U.S. economic growth coalition exerted tight control over the U.S. position at the negotiations.³⁰ They were supported in this effort by an aggressive campaign against a treaty mounted by various industry groups.³¹ Early in December of 1991, however, Sununu was forced to resign as chief of staff. Although this bolstered the hopes of the precautionary coalition that the U.S. position would change when the fourth INC meeting began later that month, Darman and others in the economic growth coalition remained securely in control of U.S. climate change policy.³²

At the 5th INC session in New York in February 1992, the Administration released a “Statement on Commitments” that delineated a set of measures that it would undertake to

²⁷Throughout the latter part of 1990, Congress and the Administration had been embroiled in negotiations over the reauthorization of the Clean Air Act. Sununu, Darman and Roger Porter, Bush’s domestic policy advisor, removed restrictions on CO₂ and watered down other provisions over the objections of Reilly, and when the Clean Air Act Amendments were passed by Congress in December, they did not address GHGs. For example, at one point during the negotiations, Reilly told several members of a House subcommittee by telephone that the administration opposed attempts to dilute a program that encouraged the use of alternative fuels in automobiles. However, an aid to Sununu was in the committee room, countermanning Reilly’s statements (Roberts, Steven V., Kenneth Walsh, Michael Satchell, Ann Andrews, and Dorian Friedman. 1990. Is Bush in nature’s way? *U.S. News & World Report*, Mar. 19, 1990. pg. 20; Harbrecht, Douglas and Lee Walczak. 1990. Sununu’s bite is as bad as his bark. *Business Week*, May 28, 1990. pg. 22). The administration also thwarted a proposal to raise car fuel-efficiency standards, although the amendments promoted clean coal technologies and energy efficiency improvements in utilities.

²⁸ Coincidentally, temperatures at Washington’s National Airport hit 70°F, breaking a record set in 1883.

²⁹ These actions included meeting international commitments to phase out chlorofluorocarbons, complying with new Clean Air Act, limiting methane emissions from landfills and implementing energy efficiency measures contained in its recently published National Energy Strategy (Abramson, Rudy. 1991. Talks on global warming pact could put U.S. in the hot seat. *Los Angeles Times*, Feb. 3, 1991. A pg. 5).

³⁰ Sununu was very aware of status of negotiations during the first year of negotiations, with Reinstein, the lead negotiator, briefing Bromley every morning and Bromley in turn briefing Sununu (Interview #7. Department of State, United States. Jan., 1989).

³¹ Western Fuels, a U.S. utility association, spent around \$250,000 to produce a video called “The Greening of Plane Earth,” which made the claim that “CO₂ fertilization of the atmosphere helps produce more food for people and wildlife.” Enterprise for Education, which markets “educational” materials on behalf of clients in the utility and energy sectors, produced a kit called “The Greenhouse Effect and Global Warming” that suggested that global warming may not be a serious problem. A number of coal, oil, and utility groups also established the Information Council for the Environment (ICE), which developed a sophisticated print and radio media campaign intended to “reposition global warming as theory, not fact.” According to internal ICE documents, the campaign was deliberately targeted at “older, less educated men” and “young, low income women.” (Levy and Egan. 1998. Capital contests: National and transnational channels of corporate influence on the climate change negotiations; Gelbspan. 1997. *The Heat is On: The high stakes battle over Earth’s threatened climate*).

³² Palmer, Randall. Climate Change Talks Resume., Dec. 7, 1991.

mitigate climate change.³³ Despite efforts by the precautionary coalition to shift the U.S. position, however, United States made it clear to the international community that Bush would not attend the U.N. Conference on Environment and Development in June if the precautionary coalition continued to insist on a treaty containing targets and timetables.³⁴ This position was reiterated at the OECD meeting in Paris later that month.³⁵

At the resumption of the INC's fifth session in May of 1992, the Administration released a document entitled *U.S. Views on Global Climate Change* that outlined a series of actions then being taken that would reduce projected net greenhouse gas emissions by 125 to 200 million metric tons in the year 2000. In doing so, it suggested that United States might not be far from the goal of reducing its net emissions of CO₂ to 1990 levels by 2000. However, Reinstein continued to reject treaty language referring to targets and timetables.

As discussed in Chapter 7, the precautionary coalition was forced to retreat from its insistence on such language, as European delegations realized that their own domestic constituencies would complain if the United States did not sign the treaty. Reinstein; Ansgar Vogel, the head of the German delegation; and David Fisk, the head of the U.K. delegation, worked out a two-paragraph compromise that required developed countries to adopt and report on national policies to limit emissions and enhance sinks, with 1990 emissions levels serving as a "guideline" for doing so. Although the Bromley group accepted this initial language, the German delegation had some difficulties with the term "guideline," as it had never been used before in the negotiations. Vogel asked that a term such as "aim" or "goal" be used instead of "guideline" in order to be more consistent with the history of the negotiations.

Most members of the Bromley group did not want to accept this change, particularly Darman, Boskins, and several others who were looking for a reason to the walk away from the negotiations. However, Watkins, Reilly, and several others recognized the need for an agreement, and were able to convince President Bush to accept the use of the word "aim."³⁶ The

³³ These included improvements in energy efficiency, transportation, and other areas. Although some saw the statement as an indication that the United States might be willing to limit its emissions, others criticized it as being only a compilation of measures already planned or required under existing law (Weisskoff, Michael. 1992. *Global Warming Rift Threatens Treaty. Washington Post*, Feb. 28, 1992. pg. A3).

³⁴ To increase public pressure, Senator Gore released a U.S. position paper leaked to him that suggested that the United States could change its position if certain conditions were met (Stevens, W. *Washington May Change Its Position On Climate. New York Times*, Feb. 18, 1992. C pg. 1). At the same time, EPA circulated informally plan that would stabilize emissions at 1990 levels by 2000, but could be abandoned if it proves unrealistic or too expensive for U.S. businesses (Shabecoff, Philip. *A Political Freeze on U.S. Policy. New York Times*, Feb. 24, 1992.).

³⁵ Prior to the meeting, many in precautionary coalition thought that the United States would change position because of election year politics and public concern regarding the environment reaching an all-time high (Shabecoff, Philip. *Environmental Concern Higher Than Ever. Greenwire*, Apr. 21, 1992.). However, Clayton Yeutter, who had replace Andrew Card as domestic policy chief, reiterated that Bush would only attend UNCED if he could sign an agreement that "is in the best interest of the United States." (Kriz, Margaret. 1992. *Global Warming Causes Political Heat. National Journal*, Apr. 11, 1992. pg. 881; Weisskoff. 1992. *Bush Was Aloof in Warming Debate; Beamish, Rita. White House Debating Whether Bush Should Attend Earth Summit. Associated Press*, Apr. 5, 1992.).

³⁶ Watkins found the word "aim" was preferable over "goal" because "a goal is like a target: you need to hit it or it doesn't count. However, you can aim at a target, but you might miss" (Interview #7. Department of State, United States. Jan., 1989).

revised language was incorporated into the final draft of the FCCC and Bush agreed to travel to Rio de Janeiro to sign the treaty. The Administration aggressively pursued ratification of the treaty by the Senate and, in December of 1992, the United States became the first industrialized country to ratify the Convention. Although the outcome was a severe disappointment to the U.S. precautionary coalition, the U.S. economic growth coalition was quite satisfied.³⁷

	<u>Affiliation Prior To 1992 Elections</u>	<u>Position In Clinton Administration</u>
T. J. Glauthier	World Wide Fund For Nature	Associate Director for natural resources, energy, and science, Office Of Management And Budget
Eileen Claussen	Environmental Protection Agency	Senior Director for Global Environmental Affairs, National Security Council; Assistant Secretary of State for Oceans, Environment and Science, Department Of State
David Doniger	Natural Resources Defense Council	Counsel to the Assistant Administrator, Office of Air and Radiation, Environmental Protection Agency
David Harwood	Senate, Office Of Timothy Wirth	Chief of Staff for Global Affairs, Department Of State
Kathleen McGinty	Senate, Office Of Al Gore	Director, Office Of Environmental Policy
William Nitze	Alliance To Save Energy	Assistant Administrator for International Affairs, Environmental Protection Agency
Rafe Pomerantz	World Resources Institute	Deputy Assistant Secretary for Environment and Development, Department Of State
Robert Watson	National Aeronautics And Space Administration	Associate Environmental Director, White House Office Of Science And Technology Policy
Timothy Wirth	Senate	Undersecretary for Global Affairs, Department Of State
Carole Browner	Florida Department of Environmental Regulation	Administrator, Environmental Protection Agency
Karl Hausker	Senate Energy and Natural Resources Committee	Deputy Assistant Administrator, Environmental Protection Agency

8.2.2. Phase 2: 1992-1994

The election of President Clinton in 1992 brought a dramatic policy shift within the executive branch, with the Precautionary Coalition gaining substantial power. Important actors in the Precautionary Coalition, many of whom had been extremely active in the international policy subsystem, replaced members of the Economic Growth Coalition in high-level positions of the White House and Cabinet Departments. Most significant among these was Vice-President Gore, but others included Kathleen McGinty, Gore’s former environmental aide, as the head of the new White House Office of Environmental Policy; Carole Browner, Gore’s former legislative director, as Administrator of the Environmental Protection Agency; Senator Wirth as Under Secretary of State for Global Affairs; and Bruce Babbitt as Secretary of the Interior. Other members of the Precautionary Coalition, many of whom came from environmental groups, assumed key positions in the Office of Management and Budget, the National Security Council, the State Department, the Department of Interior, and the Department of Energy. Table 8.1 lists some of these individuals and the changes in their positions. With this change, representatives of federal agencies became much more active in the precautionary coalition and wielded much more influence.

³⁷ Shortly after an agreement was reached on the compromise language, Yeutter wrote a letter to Rep. John Dingell explaining that the key language in the agreement was contained in two sections, and said, “Neither binds the United States to specific commitments of any kind.” (Weisskoff. 1992. Bush Was Aloof in Warming Debate).

While the precautionary coalition gained power, the economic growth coalition began to splinter and by 1994 it was no longer speaking with a consistent voice.³⁸ A number of members of the economic growth coalition, including some in the media, continued to emphasize the uncertainties associated with the issue.³⁹ Others, such as the GCC, saw this argument as counterproductive, and began to emphasize the need for developing countries to commit to emissions reductions.⁴⁰ Without a receptive audience to whom it could deliver its message and without a consistent message to deliver, the economic growth coalition found itself unable to have a substantial effect on U.S. climate policy during this period.

Once the members of the precautionary coalition assumed decision-making positions within the Clinton administration, they began working together immediately effect a change in U.S. climate change policy. In his State of the Union address in February of 1993, President Clinton announced his planned BTU tax, saying that it would reduce both greenhouse gas emissions and the budget deficit. At INC 7 the following month, Secretary of State Madeleine Albright stated that the administration was undertaking a comprehensive review of U.S. policy regarding climate change in order to determine if greenhouse gas emissions could be stabilized by the year 2000. In May of that year, President Clinton announced that the United States was committed to reducing greenhouse gas emissions to their 1990 levels by the year 2000, and the Administration then began to develop a climate change strategy to meet this target.⁴¹

On June 10-11, 1993, the White House sponsored a Conference on Global Climate Change, bringing together more than 800 participants from the federal government, industry, state and local governments, and non-government environmental organizations. The conference established ten working groups to develop specific measures for emissions reductions in a number of different areas.⁴² The final set of 47 measures were initially described in the

³⁸ Interview #4. Global Climate Coalition, United States. Mar., 1989; Interview #13. National Mining Association, United States. Jan., 1998. There were several reasons for this fracturing. More industries became engaged in the debate, particular after the FCCC was ratified in 1992. Global Climate Coalition itself had grown to 54 members by the end of 1992 (Wamstad, Dennis. Global Climate Coalition Prepares for the long haul. *Energy Daily*, Nov. 17, 1992.). A more diverse group of industries also became engaged in the issue, and, some of the industries themselves began to change. For example, many of the major oil companies began to divest themselves from coal, which weakened their ties to such groups as the National Mining Association (Interview #13. National Mining Association, United States. Jan., 1998). Finally, some industries that had previously been opposed to emission reduction efforts began to see benefits in energy efficiency improvements. For example, some in the utility industry began to express the view that their primary concern was with the distribution of energy rather than the means through which it was produced, and that improvements in energy efficiency could help them put off the need to make additional capital investments to meet rising energy demand (Interview #15. Department of Commerce, United States. Jan., 1998). As early as 1991, Southern California Edison and the Los Angeles Department of Water & Water announced plans to reduce their emissions of CO₂, and the New England Electric System endorsed the idea of a "modest" CO₂ tax the following year.

³⁹ Stevens describes a number of reports issued during the early 1990 that attempted to downplay any threat from climate change, including 1993 articles in the Washington Times and the Wall Street Journal (Stevens, W. Scientists Confront Renewed Backlash on Global Warming. *New York Times*, Sept. 19, 1993. pg. A1).

⁴⁰ Interview #13. National Mining Association, United States. Jan., 1998; Interview #4. Global Climate Coalition, United States. Mar., 1989.

⁴¹ Richter, Paul. President Backs Plan To Address Global Warming. *Los Angeles Times*, Apr. 22, 1993. A pg. 1.

⁴² These included energy supply, energy demand (residential, commercial, and industrial), transportation (auto/light truck, commercial, and infrastructure), methane and other gases, sinks, and joint implementation.

Administration's *Climate Change Action Plan*, released in October of 1993. They were provided to the INC in September of 1994 as the *U.S. Climate Action Report*.⁴³ These measures and the agencies responsible for implementing them are listed in Table 8.2.

Table 8.2 Policies and Measures Contained in the U.S. Climate Change Action Plan

Policy/Measure	Agency	Policy/Measure	Agency
Climate Challenge agreements for emissions reductions	DOE, EPA	Clean Air Act Guidelines for natural gas substitution	EPA, DOE
Climate Wise - agreements for emissions reductions	DOE, EPA	High-Efficiency Gas Technologies	DOE
Energy Star Buildings and Rebuild America	DOE, EPA	Natural gas regulatory reform	DOE
Green Lights - energy efficient lighting	DOE, EPA	Renewable-Energy Technology Consortium	DOE
State Buildings Energy Incentive Fund	DOE	Profitable Hydroelectric Efficiency Upgrade	DOE
Home Energy-Rating Systems/Energy Efficient Mortgages	DOE, HUD	Distribution Transformer Standards	DOE
Residential Building Code	DOE	Energy Star Identification for distribution transformers	DOE
Cool Communities (tree planting)	EPA, DOA	Expanded Assistance for Integrated Resource Planning	DOE, EPA
Colden Carrot energy efficient appliances	DOE	Forest harvest reductions and ecosystem management	DOA
Residential Appliance Standards	DOE	Private forest management assistance	DOA
Motor Challenge-efficient electric motors	DOE	Natural Gas STAR emissions controls	DOE
Golden Carrots for energy-efficient Industrial Equipment	DOE	Landfill methane emissions reductions	EPA
Source reduction, product recycling, pollution prevention	EPA	Coalbed and landfill outreach program	DOE, DOI
Cash Value of Parking	DOT	AgSTAR Partnerships	EPA, DOA
Innovative Transportation Strategies	DOT	HFC and PFC Control Strategies	EPA
Tire-Labeling Program	DOT	Improved Fertilizer Management	DOA
Telecommuting	DOT, OPM		

While the Administration was engaged in this internal planning process, it was also working with Congress to enact the energy tax and improved fuel efficiency standards for automobiles, two key pieces of legislation that it needed to ensure that the United States would be able to fulfill President Clinton commitment to reducing emissions to 1990 levels in the year 2000.⁴⁴ Petroleum, automobile and manufacturing groups immediately opposed these proposals. The administration was forced to make numerous concessions in order to get support within Congress. The energy tax was eventually whittled down to 4.3 cents per gallon gasoline tax that would have virtually no effect on U.S. GHG emissions.⁴⁵ Reluctant to confront Congress on similar energy issues, the Administration decided not to introduce the legislation it had been preparing that would raise the automobile fuel-efficiency standard to 40 miles per gallon by the year 2000.⁴⁶ In the absence of Congressional support for an energy tax or fuel economy standards, the 1993 *Action Plan* was expected to reduce greenhouse gas emissions by about 8

⁴³ U.S.State Department. 1994. *Climate Action Report: Submission of the United States of America Under the United Nations Framework Convention on Climate Change*. Washington, DC: U.S. Government Printing Office.

⁴⁴ As part of the deficit reduction package it submitted to Congress in 1993, the Administration proposed to raise \$71.4 billion over five years by taxing the energy content, as measured in British thermal units, of virtually all fuels. This energy tax was expected to achieve as much as one-fifth of the necessary emissions reductions (Interview #1. Department of State, United States. Dec., 1998).

⁴⁵ The policy dynamics surrounding the energy tax proposal are discussed in greater detail in Section 8.3.1.

⁴⁶ Noah, T. Clinton May Modify Pledge to Reduce U.S. Emissions of Greenhouse Gases. *Wall Street Journal*, June, 1916. pg. A2.

percent by the year 2000, far short of the Administration's goal of stabilize U.S. GHG emissions at 1990 levels by the year 2000.⁴⁷

8.2.3. Phase 3: 1994-1997

As Phase 3 of the U.S. policy process began in 1994, the economic growth coalition began to regain some of the power it had lost in 1992. After industry representatives found themselves shut out of the decision-making processes taking place within the administration, they began to turn to Congress to get their voices heard.⁴⁸ In addition, a number of members of the Economic Growth Coalition who had not been previously involved in the subsystem, particularly members of Congress, began to work actively to block consideration of significant policy measures.⁴⁹ The precautionary coalition also began to encounter some resistance from within the administration, particularly from Treasury Secretary Robert Rubin, Deputy Treasury Secretary Lawrence Summers, and National Economic Advisor Gene Sperling.⁵⁰

The U.S. precautionary coalition also began to lose some of its power as this third phase of the U.S. policy process began, particularly in terms of its ability to marshal public support for its efforts. Public concern about the environment had declined after the 1991-1992 recession, as did media coverage of environmental issues.⁵¹ In addition, the country itself became more conservative.⁵² Finally, the precautionary coalition found itself without a clear means to ensure that U.S. GHG emissions would be reduced to their 1990 levels after the defeat of its efforts to establish an energy tax or more stringent fuel economy standards. Despite these setbacks

⁴⁷ Measures already in force as part of the 1990 Clean Air Act Amendments and the 1992 Energy Policy Act were expected to contribute substantially to the necessary emissions reductions, including regulations limiting air pollution from power plants, vehicles and industry and measures to improve energy efficiency and promote alternative fuel sources (Lee, Gary. Clinton Sets Plan to Cut Emissions. *Washington Post*, Oct. 18, 1993. A pg. 1).

⁴⁸ Industry Fears Global Warming Process Being Designed to Exclude Detractors. *Utility Environment Reporter*, May 28, 1993. pg. 12. A representative of the National Mining Association complained that, after the Clinton administration took office, their usual contacts within the various agencies "wouldn't talk to us anymore." (Interview #13. National Mining Association, United States. Jan., 1998).

⁴⁹ Only two or three Congressional staff joined the U.S. delegation to the INC sessions on a regular basis, and few attended in the 1993 White House Conference. While almost 400 individuals from U.S. industry groups attended the 1993 White House Conference, only about 30 representative of industry interests, primarily representatives of industry coalitions and associations such as the Global Climate Coalition and the National Coal Association, were regular observers at INC sessions. Although some of these individuals represented organizations that were members of the GCC, they were not necessarily familiar with the issues. Many others had no representation at all at the INC, including approximately 40 representatives of state and local governments.

⁵⁰ Interview #19. Office of Management and Budget, United States. Aug., 1998. Schneider, Keith. Gore Meets Resistance in Effort for Steps on Global Warming. *New York Times*, Apr. 19, 1993. A pg. 17. Interview #8. Environmental Protection Agency, United States. Jan., 2005; Cushman, John H. No Simple Fight: The Forces That Shaped the Clinton Plan. *New York Times*, Dec. 1, 1997. F pg. 3.

⁵¹ For example, dues-paying membership in the major activist environmental organizations peaked in 1990 at 2.4 million, and declined to 2.1 million members by 1995, while network news coverage of environmental issues dropped 60 percent from its 1989 peak (Schneider, K. Big Environment Hits a Recession. *New York Times*, Jan. 1, 1995. pg. F4; Allen, S. Murky Times for Environmentalism. *Boston Globe*, Nov. 12, 1994. pg. 1; Carmody, K. 1995. It's a Jungle Out There: Environmental Journalism in an Age of Backlash. *Columbia Journalism Review* pg. 45).

⁵² Paarlberg, R. L. 1996. A domestic dispute: Clinton, congress, and international environmental policy. *Environment* 38, 8: 16.

however, it continued its pursuit of its primary goal: an international agreement containing legally binding targets and timetables

The first step in this pursuit was the public recognition that the FCCC needed to be changed. In February of 1994, Undersecretary of State Wirth announced at INC 9 meeting that the commitments of industrialized countries “do not...adequately address policies and measures to be taken beyond the year 2000, and we urge (the INC) to begin a serious effort to explore how we may all further the objective of this convention.”⁵³ This announcement came in spite of complaints by members of Congress such as John Dingell and a fierce lobbying effort by industry representatives who argued that such an announcement was premature and the necessary of the science had not been conducted.⁵⁴

It was also becoming clear that the Clinton administration’s efforts to reduce emissions were not adequate to meet the goal that the President had laid out the previous year. In April, an analysis by NRDC indicated that the measures laid out in the 1993 Action Plan would achieve only a third of the emissions reductions needed to meet goals.⁵⁵ The administration held a two-day public meeting that summer to look at how current programs could be changed and what additional measures could be considered to strengthen its plan.⁵⁶ Later that year, the FCCC Secretariat reported that its preliminary review of the U.S. action plan indicated that U.S. emissions would be 3 percent higher than 1990 levels. Then at COP 1 in April, 1995, Undersecretary Wirth also conceded that the United States would fall short of its goal to reduce emissions by about 30 percent.⁵⁷

Although the economic growth coalition lost power in 1992 with the election of President Clinton and Vice-President Gore, it regained significant power when the Republicans took control of Congress in January of 1995.⁵⁸ This enabled key members of the economic growth coalition to assume the chairs of important Congressional committees and other leadership positions. Some of these individuals and the positions they assumed are shown in Table 8.3.

This shift enabled the economic growth coalition to use the Congressional budget process to affect climate change programs. Several members sponsored legislation in the House that would

⁵³ Statement of Undersecretary of State Timothy Wirth at the Ninth Session of the Intergovernmental Negotiating Committee of the U.N Framework Convention on Climate Change. February 10, 1994. On file with the author.

⁵⁴ Utilities' Lobbying Effort Fails as U.S. Questions Adequacy of Climate Treaty. *Utility Environment Report*, Feb. 18, 1994. pg. 16.

⁵⁵ Wamstad, Dennis. Environmentalists See Emissions Gap In Climate Plan. *Energy Daily*, Apr. 19, 1994.; Adler, Tina. 1994. Clinton emissions program under fire. *Science News*, Apr. 30, 1994. pg. 278.

⁵⁶ Behrens, Lisa. EPA Official Says Greenhouse Regulations May Be Needed To Bridge Gap. *Inside Energy*, Aug. 1, 1994. pg. 3.

⁵⁷ Katz, Lee Michael. US To Fall 30% Short of Target. *USA Today*, Mar. 14, 1995.

⁵⁸ Prior to the 1994 elections, the Republic Party held 42 percent of all Congressional seats. After the elections, they held 53 percent of all seats, a 28 percent increase (McCright and Dunlap. 2003. Defeating Kyoto: The conservative movement's impact on U.S. climate change policy). The Republicans leaders were generally more hostile to environmental regulation. Paarlberg notes that Senior Democrats in the 103rd Congress in both the House and Senate were rated three times higher by the League of Conservation Voters than senior Republicans. However, senior Republicans in both houses were rated four times higher by the Competitive Enterprise Institute than senior Democrats (Paarlberg. 1996. A domestic dispute: Clinton, congress, and international environmental policy). See also Dellios, Hugh. Environmental Groups Now On List of Endangered Species. *Chicago Tribune News* pg. 3.

have cut funding for the Climate Action Plan by forty percent.⁵⁹ Others in the Senate attempted to cut U.S. contributions to the IPCC and INC.⁶⁰ Finally, they began to use Congressional

Table 8.3. Economic Growth Coalition Members Gaining Key Positions in Congress after 1994 elections

EGC Member	Position
Bob Dole	Senate Majority Leader
Jesse Helms	Chair, Senate Foreign Affairs Committee
Frank Murkowski	Chair, Senate Energy and Natural Resources Committee
Newt Gingrich	Speaker, House of Representatives
Dana Rohrbacher	Chair, House Science Energy And Environment Subcommittee
Tom Delay	Majority Whip, House of Representatives
Robert Walker	Chair, House Science Committee

hearings to emphasize the beliefs of the economic growth coalition.⁶¹

In April 1995, at the First Conference of the Parties in Berlin, Vice President Gore joined the EU in stating that that FCCC is inadequate. He called for the Parties to produce a mandate that sets in motion a process that examines “what we each can do to contribute to further reductions in greenhouse gas emissions.”⁶² Because the administration was finding it difficult to find politically-viable means for achieving further reductions domestically, it had been forced to conclude the previous year that some of the U.S. reductions would need to be achieved through

⁵⁹ Noah. 1916. Clinton May Modify Pledge to Reduce U.S. Emissions of Greenhouse Gases; Hebert, Josef. Reducing Greenhouse gases runs Into Political, Economic Realities. *Associated Press*, Mar. 27, 1995. For example, Dana Rohrbacher, Chairman of the House Science Energy And Environment Subcommittee, proposed substantial cuts in funding for climate change research, and to completely eliminate funding for the U.S. Climate Change Action Plan (Interview #17. House of Representatives, United States. Mar., 1998). Rep. Rohrbacher, who regarded climate change science as “liberal claptrap,” stated, “In another area of savings, trendy science that is proposed up by liberal politics rather than good science has cost us billions... We will not permit scare mongers and Chicken Littles to successfully push Federal policies that tax our people into lower standards of living, raise the price of products they buy and regulate them out of a job. Nowhere is scientific nonsense more evident than in global warming programs that are sprinkled throughout the current year budget” (Brown, George E. 1996. *Environmental Science Under Siege: Fringe Science and the 104th Congress*. Democratic Caucus of the Committee on Science, U.S. House of Representatives). See also Kriz, Margaret. 1995. Global Warming - Proof and Politics. *National Journal*, Dec. 9, 1995. pg. 3062; and Stevens, W. Trying to Stem Emissions, U.S. Sees Its Goal Fading. *New York Times*, Nov., 1998. pg. A1.

⁶⁰ For example, Jesse Helms, Chairman of the Senate Foreign Relations Committee, proposed to cut U.S. funding for the IPCC and the UNFCCC to levels that would have severely affected their operations (Lippman, Thomas. Helms Target U.N. Programs for Cuts. *Washington Post*, May 6, 1995. A pg. 4). Because the United States provides 25 percent or more of the funding for most U.N. programs, these cuts would have severely undermined the international policy process.

⁶¹ These hearings were used to highlight the scientific uncertainties and the potential economic costs, and well-known “skeptics” and other members of the economic growth coalition were frequent witnesses. McCright and Dunlap note that by 1997, 54 percent of all Congressional testimony was given by witnesses allied with various industry groups and conservative think tanks, while only 19 percent of such testimony was given by scientists and representatives of environmental groups (McCright and Dunlap. 2003. *Defeating Kyoto: The conservative movement's impact on U.S. climate change policy*). See also Brown. 1996. *Environmental Science Under Siege: Fringe Science and the 104th Congress*.

⁶² Bajak, Frank. Top U.S. Diplomat On Environment Keeps Expectations Low At Climate Talks. *Associated Press*, Apr. 4, 1995.

joint implementation.⁶³ It insisted, therefore, that JI must be part of mandate.⁶⁴ It also insisted that developing countries such as India and China also commit to emissions reductions as part of the Berlin Mandate. It dropped these conditions, however, when it became clear that to continuing to do so would jeopardize any possibility of an agreement.⁶⁵ This sudden shift surprised and angered many members of the economic growth coalition, particularly in Congress.⁶⁶

The Clinton administration and other members of the precautionary coalition began again in September 1995, to look for ways to strengthen the U.S. Action Plan, and once again raised the possibility of taxes or emissions reductions. Industry groups resisted this effort, arguing that more time was needed for the voluntary programs currently being implemented to work.⁶⁷ Later that year, the “Car Talks,” a year-long effort by administration, NGO and automobile industry to reach an agreement on some of the transportation-related measures proposed in the 1993 Action Plan, fell apart after they were unable to reach a consensus.⁶⁸ Early the following year, Senate Majority Leader Bob Dole introduced proposal to repeal the 4.3 cents per gallon gas tax.

Despite these setbacks, the Precautionary Coalition continued to pursue its goal of an international agreement containing legally binding targets and timetables. At COP 2 in July 1996, Tim Wirth made this goal explicit by calling for intensified international negotiations on a “realistic, verifiable and binding medium-term emission target” that would be adopted in Kyoto the following year.⁶⁹ The following January, the United States submitted to the FCCC Secretariat a “Draft Protocol Framework” containing more specific language for a treaty.⁷⁰ The framework also proposed that the Protocol contain an “Annex B” list of countries without legally binding targets that would voluntarily adopt emission limitations, and that commitments for all Parties should be agreed by 2005. It did not, however, propose any specific targets and timetables, as members of the precautionary and economic growth coalitions within the administration could not reach an agreement on a set of targets and timetables to which the United States could realistically commit itself.

⁶³ Interview #1. Department of State, United States. Dec., 1998.

⁶⁴ Atkinson, Rick. Greenhouse Gas Cutback Goals Left Up in Air. *Washington Post*, Apr. 8, 1995. A pg. 24.

⁶⁵ Behrens, Lisa. White House Faulted for Backing New Greenhouse Gas Plan in Berlin. *Inside Energy*, Apr. 17, 1995. pg. 5.

⁶⁶ Industry groups and members of Congress complained that, in a March 31 letter to Rep. John Dingell, President Clinton stated that “the U.S. delegation will not accept any outcome or agree to any process that adversely affects the United States and its industrial competitiveness.” (Industry says Clinton Administration Reneged On Pledge During Berlin Talks. *Energy Report*; Wamstad, Dennis. Business Groups Unhappy With U.S. Climate Change Stance. *Energy Daily*, Aug. 22, 1995.).

⁶⁷ Cushman, John H. Clinton Administration Considers Tougher Measures. *New York Times*, Sept. 24, 1995. 1 pg. 31.

⁶⁸ One reason for the collapse was that automobile manufacturers refused to consider tougher fuel economy standards and incentives for consumers to purchase fuel-efficient cars. (Cushman. 1995. Clinton Administration Considers Tougher Measures; Interview #10. Department of Transportation, United States. Jan., 1998; Culbertson, Katherine. 1995. Oil Industry balks at endorsing report on global warming. *Oil Daily*, Dec. 3, 1995. pg. 3).

⁶⁹ Speech by Timothy Wirth, Under Secretary of State for Global Affairs, on file with the author.

⁷⁰ This proposed language specified, among other things, 5-year emission budgets, JI, emissions trading, and the borrowing of emissions “units” from one period to the next. See FCCC/ABGM/1997/MISC.1.

In early 1997, the economic growth coalition intensified its campaign against the emerging Kyoto Protocol. The GCC, the National Association of Manufacturers and other members of the economic growth coalition enlisted the help of the labor movement, particularly the United Mine Workers of America and the AFL-CIO.⁷¹ These labor unions, together with the National Mining Association, began to lobby Congress to take a firmer stance against the treaty.⁷²

At AGBM 7 in June, the United States elaborated on the proposal it made earlier in the year. This elaboration included specific language for emissions trading, joint implementation, and a requirement that developing countries identify and adopt “no-regret” measures.⁷³ It also established a White House Climate Change Task Force to coordinate the development of a revised climate change action plan that would be submitted to the FCCC Secretariat prior to COP 3 in December. The administration also held climate change roundtable early the following month as first step in public education campaign intended to build support for the Kyoto Protocol.⁷⁴

The administration remained unable to reach an agreement internally on a specific set of targets and timetables to which it could commit and the fissure between members of the precautionary and economic growth coalitions within the administration deepened as the summer progressed.⁷⁵ The debate became one of competing models and forecasts, with the economic growth coalition arguing that a stringent target would launch the United States into recession and the precautionary coalition arguing that such target would stimulate the development of new technologies.⁷⁶

This debate intensified in late July with the passage in the Senate of the Byrd-Hagel resolution. Introduced by Senators Robert Byrd and Chuck Hagel, the resolution urged the Administration not to sign a treaty that could result in “serious harm” to the economy or that would limit greenhouse gas emissions in the United States but does not impose specific restrictions and similar timetables on developing nations.⁷⁷ The resolution was the result of the

⁷¹ Although coal miners held just 80,000 jobs in the United States in 1997, emissions targets would have disproportionate impact on the United Mine Workers. Coal miners also had significant clout in AFL-CIO, as Richard Trumka, a former United Mine Workers president, was the secretary-treasurer of the AFL-CIO and played an important role in presenting the coal miners case. The labor federation was particularly influential in the Clinton administration, and played a crucial role in defeating Clinton’s labor policy the previous year (Cushman, John H. Intense Lobbying Against Global Warming Treaty. *New York Times*, Dec. 7, 1997. 1 pg. 28).

⁷² To support these efforts, the Business Round Table retained the public affairs firms Powell Tate and Ketchum Public Relations to produce a \$1 million ad campaign against treaty (Stone. 1997. *The Heat’s On*).

⁷³ Fact Sheet on U.S. Climate Change Proposal. U.S. Department of State. June, 1997.

⁷⁴ Warrick, Joby. 1997. Clinton Outlines Global Warming Education Plan; Nation Remains Skeptical of Greenhouse Effect. *Washington Post*, July 25, 1997. A pg. 3. This effort was supported by such groups as the Business Council for Sustainable Energy, which started its own public campaign to build support for the treaty.

⁷⁵ Tensions were such that members of the economic growth coalition attempted to meet with President Clinton privately without informing Vice-President Gore beforehand (Interview #20. Office of Environmental Policy, United States. Aug., 1998).

⁷⁶ Cushman. 1997. *No Simple Fight: The Forces That Shaped the Clinton Plan*.

⁷⁷ Music, Kimberley. 1997. Senate Demands all nations agree to climate pact. *Oil Daily*, July 28, 1997. pg. 1. Byrd, a Democrat from West Virginia, was opposed to the Protocol because of its potential impacts on coal mining in his state. Hagel, a Republican from Nebraska, was opposed to the treaty primarily for ideological reasons (Zengerle, Jason. 1998. *Hagelianism*. *New Republic*, Feb. 9, 1998. pg. 12).

intense lobbying by the labor unions and the National Mining Association.⁷⁸ Although non-binding, it was a substantial victory for the economic growth coalition, which was able to capitalize on a general lack of knowledge of the issue on the part of most Senators to garner a 95-0 unanimous vote.⁷⁹

Members of the economic growth coalition continued its efforts to solidify Congressional opposition to the Kyoto Protocol in September by launched a \$13 million dollar advertising campaign against the treaty.⁸⁰ The following month, the precautionary coalition launched its own public education campaign in support of the Kyoto Protocol. At a day-long policy conference, President Clinton outlined the basic elements of the revised U.S. climate change action plan.⁸¹ This plan, the result of negotiations between senior-level members of the precautionary and economic growth coalitions within the administration, consisted of three sequential stages leading to binding emissions reduction targets.⁸² However, the Administration remained unable to resolve its internal debate regarding the target itself.

Three options for such a target were being considered at this point. The first, favored by the precautionary coalition, would be to stabilize emissions at 1990 levels by 2010. The second,

⁷⁸For example, the NMA sent approximately 40 chief executives up to Capitol Hill in early June, where they visited more than 50 Senators. Byrd introduced the resolution shortly after he met with executives from several coal companies, including Peabody Coal Co., which is headquartered in West Virginia (Stone. 1997. *The Heat's On*). Took advantage of generally uninformed congress.

⁷⁹Although many members of Congress had adopted a position on climate change and the Kyoto Protocol, few had much of an understanding of the various scientific, economic, and political issues involved (Schmitt, Eric. Congress, the Kibbitzer at the Climate Table, Waits for Its Turn. *New York Times*, Dec. 1, 1997. F pg. 6). Much of could be due to a generally poor understanding of international affairs. At the time of the vote, a majority of House members and forty percent of Senators had been elected after the fall of the Berlin wall, and a third of all members of Congress lacked passports (Apple, R. W. Clinton on His Foreign Policy: A Rose-Tinted World. *New York Times*, Dec. 18, 1997. A pg. 12).

⁸⁰The Global Climate Information Project, which featured radio and TV commercials, ads in major newspapers, and an Internet Web Site, criticized the Kyoto Protocol by saying, "It's not global, and it won't work" and predicting "dire consequences" for Americans if the Clinton administration signs the agreement. Sponsors of the project included the National Association of Manufacturers, the Air Transport Association of America, the National Cattlemen's Beef Association, the United Mine Workers of America, and others (Warrick, Joby. Business Gears Up. *Washington Post*, Oct. 9, 1997. A pg. 1). Eileen Claussen commented, "By targeting Congress, the industries responsible for the advertising campaign have widened the rift between the two branches. This had the effect of pulling the United States farther away from most other countries and hardening its position on what would constitute an acceptable target and on what should be required of developing countries." Although several environmental groups attempted to mount a modest campaign to counter the GCIP, they could not devote a comparable amount of funding to the effort (Cushman. 1997. *Intense Lobbying Against Global Warming Treaty*).

⁸¹As one part of the administration's public education campaign, more than 100 TV weather forecasters were brought to the White House for an all-day teach-in on global warming and to ask them to help educate the public so that it would support the Protocol (Rankin, Robert A. TV forecasters recruited for global-warming war. *Denver Post*, Oct. 2, 1997. A pg. 15; Cushman, John H. Clinton Hones Sales Pitch on Global Warming Pact. *New York Times*, Oct. 4, 1997. A pg. 10).

⁸²The first stage, which would begin immediately, would involve federal support for research into and development of new technologies; tax incentives for early action; and industry consultations. The second stage would involve an in-depth review and evaluation of the various actions taken in the previous stage in preparation for a system of tradable emissions permits. The final stage, which would not occur for another decade, would involve meeting binding targets through a domestic and international emissions trading program (Cushman. 1997. *No Simple Fight: The Forces That Shaped the Clinton Plan*).

avored by the economic growth coalition, would be to gradually reduce the growth rate of emissions and to freeze them eventually. The third, a compromise between the first two, would be to stabilize emissions by 2015 or 2020. To address congressional concerns regarding economic costs, all three would include an escape mechanism that would limit the amount of money companies would need to spend to meet any emissions targets.⁸³

It was not until late October that the administration was able to reach an internal agreement on targets. At the AGBM 8 meeting in Bonn, the United States proposed that all countries be required to reduce their emissions of CO₂, CH₄, N₂O, HFCs, PFCs, and SF₆ collectively to 1990 levels in the budget period 2008-2012. However, Parties would be able to use JI and emissions trading and borrow from subsequent budget periods in order to meet this target. It also said that it would not assume binding obligations "unless key developing nations meaningfully participate" in the effort.⁸⁴

When COP 3 began on December 1, 1997, in Kyoto, the United States indicated that it was willing to abandon an across-the-board target and accept differentiated targets, including the EU bubble. Stuart Eizenstat, who had replaced Timothy Wirth as the lead negotiator for the United States, made this concession in an effort to jump-start the negotiations.⁸⁵ Eizenstat's concession drew no response from the EU, however, and the negotiations remained stalled through the first week of the conference.

At the beginning of the following week, Vice President Gore traveled to Kyoto in an effort to break the deadlock. He had become in constant communication with the U.S. delegation since the beginning of the meeting, and become increasingly concerned that COP 3 would end without an agreement. After consulting with U.S. negotiators, democratic senators, and President Clinton, he instructed Eizenstat to take a softer line on emissions targets if other countries would agree to a framework of flexible, market-based implementation programs and on "meaningful participation" by developing countries.⁸⁶ This helped restart the negotiations, as other countries responded to Eizenstat's agreement to accept more aggressive cuts in emissions with concessions of their own.

On the last day of the meeting, the United States, Japan, and the EU had reached a tentative agreement on targets and the number of gases. However, it was understood that this agreement was not final until agreements had been reached on the other elements of the proposed treaty. It had also become clear that none of the various U.S. proposals for bring developing countries into the agreements would be accepted. To reach an accord, Gore gave Eizenstat permission to back down from this demand without reopening the discussion on targets.⁸⁷ Gore then called Japanese

⁸³ Interview #1. Department of State, United States. Dec., 1998; Cushman, John H. Top Aides Urge Clinton to Ease Global Warming Emission Goal. *New York Times*, Oct. 10, 1997. A pg. 1 .

⁸⁴ Remarks by the President on Global Climate Change, National Geographic Society, Washington, D.C. October 22, 1997, on file with the author.

⁸⁵ Tim Wirth had left the State Department the previous month to be the director of Ted Turner's United Nations Foundation.

⁸⁶ Interview #7. Department of State, United States. Jan., 1989; Interview #1. Department of State, United States. Dec., 1998; Warrick. 1997. *Pact Rescued in Final Hours: Turbulence Pervaded First round of Greenhouse Gas Talks*.

⁸⁷ Interview #1. Department of State, United States. Dec., 1998; Warrick. 1997. *Pact Rescued in Final Hours: Turbulence Pervaded First round of Greenhouse Gas Talks*.

Prime Minister Ryutaro Hashimoto to urge him to accept a target that was one percentage point above the 5 percent target that Japanese negotiators had said was their bottom line. By the morning of December 10, the Parties had reach an agreement on targets of 8 percent, 7 percent, and 6 percent below 1990 levels for the EU, the United States, and Japan, respectively, that would apply to CO₂, CH₄, N₂O, HFCs, PFCs, and SF₆ collectively, for the budget period 2008-2012. In accepting this agreement, however, President Clinton announced that the administration would not submit the treaty for ratification in the Senate until it could persuade key developing nations such as China and India to limit their emissions of GHGs.⁸⁸

8.3 OVERLAPPING SUBSYSTEMS

As was discussed in Section 8.2.2, most of the measures considered for or proposed in the 1993 U.S. Climate Change Action Plan were to be developed and implemented in a number of different overlapping subsystems. The remainder of this chapter discusses the dynamics that transpired in three of these subsystems: the Tire Regulation Subsystem, the Tax Policy Subsystem, and the Green Lights/Energy Star program.

8.3.1. The U.S. Tire Regulation Subsystem

Policy related to the proposed tire labeling system was negotiated between 1994 and 1995 within what can be called the U.S. Tire Regulations subsystem. It is within this subsystem that policies, regulations and standards regarding vehicle tires sold in the United States are determined. This subsystem partially overlapped with the U.S. climate policy subsystem in that a few members from both the Precautionary and Economic Growth coalitions participated in both subsystems. As in the other subsystems, two opposing coalitions formed within this subsystem: a pro-labeling coalition and an anti-labeling coalition. The pro-labeling and Precautionary coalitions shared some members, as did the anti-labeling and Economic Growth coalitions. However, many participants in this subsystem, particularly from Congress and the tire industry, were not participants in the larger subsystem and were not overly concerned with the climate change issue. The anti-labeling coalition ultimately dominated the subsystem and was able to defeat the proposal.

The development of a rating for rolling resistance was first introduced at the 1993 White House Conference on Global Climate Change. At a meeting of the Auto and Light Truck Workshop of the Transportation Working Group of the Conference, Michelin presented a paper asserting that the average rolling resistance for original equipment all-season radial tires was 22 percent less than that for typical replacement tires, and that fuel economy could be improved if replacement tires had the same rolling resistance as original equipment tires. This led the Administration to include in its Climate Change Action Plan an initiative in which the Department of Transportation would issue new rules and test procedures requiring manufacturers to test and label tires relative to their rolling resistance.

Responsibility for the development of the tire-labeling program fell to the Department of Transportation's National Highway Traffic Safety Administration (NHTSA). On April 25, 1994, NHTSA published a Request for Comments in the Federal Register requesting public comment

⁸⁸ Baker, Peter and Helen Dewar. Long Road Ahead for Global Warming Pact; Administration Turns to Process of Making Its Case in Congress. *Washington Post*, Dec. 12, 1997. A pg. 1.

on a proposal to amend the Uniform Tire Quality Grading Standards (UTQGS) by replacing the existing temperature resistance grade with a rolling resistance/fuel economy grade.⁸⁹ In making this proposal, the NHTSA argued that most of the tire-buying public was not aware of or did not understand the significance of the temperature resistance rating.⁹⁰ Making this change would provide a measure of a key fuel economy characteristic of tires and respond to the President's Climate Change Action Plan.

Seven tire manufacturers responded to the request for comments, of which Michelin was the lone supporter.⁹¹ Nine trade and consumer associations also responded to the Initial Request for Comments, five of which supported a rolling resistance grade and four of which were opposed. Opponents to the rolling resistance grade cited a wide range of objections. Some asserted that the government should not force consumers to bear the cost of testing and remolding a new UTQGS symbol which will be passed on to them by manufacturers, while other expressed concern that addition of a rolling resistance rating could cause consumers to purchase tires that have a lower overall traction performance. They also argued that there is no need to establish a rolling resistance grade, as the rolling resistance of original equipment (OE) tires is constantly being improved to meet CAFE standards and that that technology is included in after-market tires through standardization.⁹²

Michelin, the only company that had undertaken significant research into approaches for reducing rolling resistance, supported the deletion of the temperature resistance grade, stating that it does not serve the purpose for which it was intended and does not provide useful consumer information.⁹³ NHTSA also supported the change, noting that tire manufacturers have been producing low rolling resistance OEM tires for vehicle manufacturers since 1980 and equivalent low rolling resistance tires are available on the replacement market.

In June of 1995, the NHTSA issued a Notice of Proposed Rulemaking in which it formally proposed to amend the Uniform Tire Quality Grading Standards by replacing the temperature resistance grade with a rolling resistance/fuel economy grade. The Notice of Proposed Rulemaking generated over 120 comments from from a wide range of individuals and

⁸⁹ 59 FR 19686.

⁹⁰ The existing UTQGS required tires to be labeled with their temperature resistance grade indicating the extent to which heat is generated and/or dissipated by a tire. Heat is generated by the energy absorbed by the tire from the friction caused by the flexing and slipping of the rubber as it rolls along the road. If the tire is unable to dissipate that heat effectively or if the tire is unable to resist the heat buildup, its ability to run at high speeds without failure is reduced.

⁹¹ Opponents included Bridgestone/Firestone, Inc. (BF), The Goodyear Tire and Rubber Company, General Tire (GT), MTS Systems Corporation, Dunlop Tire Corporation, and Cooper Tire and Rubber Company.

⁹² Arguments cited in the Notice of Proposed Rulemaking for amendments to the Uniform Tire quality Grading Standards, 60 FR 27472.

⁹³ Interview #11. Department of Transportation, United States. Jan., 1998; Interview #10. Department of Transportation, United States. Jan., 1998. Michelin also argued that vehicle manufacturers, in order to meet fuel economy requirements, have long required their tire suppliers to provide low rolling resistance original equipment (OE) tires while still imposing strict standards on treadwear, traction, and speed durability. The establishment of a rolling resistance grade for all tires would encourage manufacturers to improve the rolling resistance characteristics of replacement tires and bring them up to the capabilities of OE tires. Finally, it argued that the additional consumer cost would be no more than \$2.50 per tire, and that these costs would be more than offset by the value of the fuel conservation and reduction of global warming gases that rolling resistance labeling would make possible.

organizations, including members of Congress; the Department of Energy; tire manufacturers, wholesalers, and dealers; and environmental, safety, and consumer advocates. Except for Michelin, the tire industry and members of Congress strongly opposed the fuel economy proposal. Particularly vocal were Senator John Glenn and other representatives from Ohio, where the headquarters for Goodyear and Cooper Tire are located and which has long been a center for tire manufacturing.⁹⁴ The Department of Energy, on the other hand, along with most advocacy groups and most members of the public, supported the proposal.

The NHTSA hosted a public meeting on the UTQGS proposals on July 28, 1995, in order to provide additional opportunity for commenting. The NHTSA then extended the NPRM comment period once again, to September 1, 1995, to permit participants at the public meeting an opportunity to file written responses to matters presented at the public meeting. Although the comment period closed on September 1, 1995, NHTSA continued to receive correspondence on both sides of the rolling resistance issue, including letters from various members of the Congress.⁹⁵

In the meantime, opponents of the proposal within Congress used the appropriations process to stop the rule change. That July, a provision was inserted into the House version of the Transportation Appropriations Act for Fiscal Year 1996 that prohibited the NHTSA from planning, finalizing, or implementing any rulemaking which would require that passenger car tires be labeled to indicate their low rolling resistance.⁹⁶ Although the Senate version of the bill did not contain a similar provision, opponents of the proposal were able to have it included in the conference report without opposition. In early November, 1995, while NHTSA was still evaluating the comments and data from the NPRM and the public meeting, the Transportation Appropriations Act for Fiscal Year 1996 was enacted prohibiting the obligation or expenditure of any funds:

"[T]o plan, finalize, or implement any rulemaking to add to section 575.104 of title 49 of the Code of Federal Regulations any requirement pertaining to a grading standard that is different from the three grading standards (treadwear, traction, and temperature resistance) already in effect."

This effectively halted all further work on a rolling resistance grade.⁹⁷

8.3.2. The U.S. Tax Policy Subsystem

The fate of Clinton Administration's proposal for an energy tax was determined in the U.S. Tax Policy Subsystem between 1993 and 1994. This subsystem had a precautionary coalition

⁹⁴ Interview #10. Department of Transportation, United States. Jan., 1998.

⁹⁵ Interview #11. Department of Transportation, United States. Jan., 2005; Interview #10. Department of Transportation, United States. Jan., 1998.

⁹⁶ In including this provision, the House Appropriations Committee stated that there is evidence showing that the promotion of low rolling resistance characteristics negatively impacts safety, while is little evidence to indicate that the proposal will have a positive impact on fuel economy (House Rpt.104-177 - Department Of Transportation And Related Agencies Appropriations Bill, 1996).

⁹⁷ Final Rule, amendments to the Uniform Tire Quality Grading Standards, 61 FR 47437. Similar language was also included in the 1997 transportation appropriations bill.

that was parallel to and shared the same beliefs as that of the U.S. climate policy subsystem, but were not as organized and vocal in their support for the proposed tax.⁹⁸ Opposing this coalition was an anti-tax coalition made up of a wide range of individuals and organizations. Many members of this anti-tax coalition were not participants in other climate subsystems, and did not necessarily hold the same beliefs as the Economic Growth coalition. However, they were sufficiently powerful that they were able to transform the proposed BTU tax into a minor gas tax increase.

When President Clinton announced the U.S. commitment to reducing emissions to 1990 levels in the year 2000, the Administration had anticipated achieving much of this reduction from an energy tax and improved fuel efficiency standards for automobiles.⁹⁹ As part of its deficit reduction package introduced in Congress in 1993, the Administration proposed an energy tax that was expected to achieve as much as one-fifth of the necessary emissions reductions.¹⁰⁰ The initial proposal was to raise \$71.4 billion over five years by taxing the energy content, as measured in British thermal units, of virtually all fuels. Coal and gas were to be taxed at a rate of 25.7 cents per million BTUs while oil was to be taxed at a much higher 59.9 cents to discourage its use and offset the advantage that it would otherwise have over coal. Vice-President Gore had initially proposed a more narrow “carbon” tax on fossil fuels. However, Clinton decided that Congress would never approve such an approach, as it would have an unacceptably high impact on coal producing and coal using states, particularly in the Midwest.¹⁰¹

The proposal was immediately opposed by petroleum and manufacturing groups such as the American Petroleum Institute and the National Association of Manufacturers, as well as many members of Congress. Representatives from the coal producing states and the coal industry, led by Senator Byrd, argued that the coal industry was already overburdened by the terms of the 1990 Clean Air Act Amendments and should be exempted from the surcharge. When the administration gave in to the coal industry but left the proposed surcharge in place for petroleum, representatives from oil-producing states and those states with colder climates were angered. The tax was also attacked as putting the burden on the middle class, which had been promised a tax cut rather than a tax increase in the 1992 elections. The administration was forced to make numerous concessions in order to get support within Congress.¹⁰² Even then, the House of Representatives approved it by only two votes.¹⁰³

The energy tax proposal became completely stymied in the Senate Finance Committee, which has jurisdiction over tax issues. Democrats David Boren of Oklahoma and Bennett Johnston of Louisiana, both of whom sat on the Committee and opposed the tax, introduced a bipartisan alternative that eliminated energy taxes altogether, replacing them with caps on

⁹⁸ Paarlberg. 1996. A domestic dispute: Clinton, congress, and international environmental policy.

⁹⁹ Interview #1. Department of State, United States. Dec., 1919. See also Paarlberg. 1996. A domestic dispute: Clinton, congress, and international environmental policy.

¹⁰⁰ The tax as introduced would tax B.T.U.'s. or British Thermal Units, and was expected to reduce carbon emissions by 25 million metric tons by 2000. (Noah, T. The Clinton Tax Package: Increase in Gasoline Levy Muddled as Energy Tax Comes Under Fire. *Wall Street Journal*, May 28, 1993. pg. A4).

¹⁰¹ Paarlberg. 1996. A domestic dispute: Clinton, congress, and international environmental policy.

¹⁰² Gosselin, Peter. New Twists in fuel tax proposal. *Boston Globe*, Apr. 2, 1993. National/Foreign pg. 1.

¹⁰³ Calmes, J. Democratic Leaders Push Gas Tax Boost. *Wall Street Journal*, July 19, 1993. pg. A12.

entitlement spending.¹⁰⁴ Another Democrat on the Committee who opposed the energy tax, John Breaux of Louisiana, suggested instead a gasoline tax.¹⁰⁵ Although the transportation lobby vigorously opposed this gas tax, it was strongly supported by automobile manufacturers, which hoped it would avert tougher fuel efficiency standards.¹⁰⁶ The White House was forced to go along with Breux's proposal in order to get the measure out of the Committee, and a 4.3 cent-per-gallon gasoline tax was passed in the Senate by a single vote, that of Vice President Gore.

In the Conference Committee, where the House BTU tax and the Senate gasoline tax were to be reconciled, Senate Democrats again vigorously opposed any sort of energy tax, with Senator Boren once more playing a key role.¹⁰⁷ Senator Max Baucus, a Democrat from Montana, also rejected any gas tax above the 4.3 cents-per-gallon tax passed by the Senate. Once again, the Administration was forced to accept the lower gas tax in order to get a deficit-reduction bill passed at all.

¹⁰⁴ Calmes, J. Clinton Faces A New Threat On Energy Tax. *Wall Street Journal*, May 21, 1993. pg. A2.

¹⁰⁵ Noah. 1993. The Clinton Tax Package: Increase in Gasoline Levy Mulled as Energy Tax Comes Under Fire.

¹⁰⁶ Seib, G. F. and M. K. Frisby. Selling Sacrifice: As Opponents Gear Up, Clinton Prepares Pitch for his Economic Plan. *Wall Street Journal*, Feb., 1995. pg. A2; Templin, N. and T. Noah. Auto firms Urge Higher Gasoline Tax to Avert Tougher Fuel-Use Standard. *Wall Street Journal*, Jan., 1992. pg. A4.

¹⁰⁷ Calmes, J. Clinton Agrees To Look for Alternatives To Proposed BTU-Based Energy Tax. *Wall Street Journal*, June 18, 1993. pg. A2

CHAPTER 9 - CLIMATE POLICY DEVELOPMENT AND IMPLEMENTATION IN THE NETHERLANDS

9.1 INTRODUCTION

In the Netherlands, national policy regarding climate change has been determined within a Dutch Climate Policy Subsystem. The climate policy process between 1988 and 1997 occurred in three phases. The first, from 1988 to mid-1990, resulted in first National Environmental Policy Plan (NEPP) containing the commitment to stabilize emissions of CO₂ at 1990 levels by 1995 and reduced by 3 to 5 percent by 2000. The second, from 1992 to mid 1994, resulted in a set of emission reduction measures contained in the second National Environmental Policy Plan (NEPP-II) and the Netherlands' national report submitted to the FCCC Secretariat that were expected to reduce stabilize CO₂ emissions at 1990 by 2000. The third phase took place from late 1993 to late 1997 and resulted in the final Kyoto target of 8 percent below 1990 levels by 2012.

The NEPP and the NEPP-II called for the implementation of range of policies and measures that would meet these objectives. Emissions continued to rise over the course of the following years, however. By 1995, CO₂ emissions were almost 7 percent higher than in 1990, and were 8 percent higher than 1990 levels in 2000.¹ Like the situation of the United States, this increase was due to a number of reasons. Economic growth had been higher than expected. Budget constraints had reduced energy and other subsidies.² However, this increase was also due to problems in the implementation of various measures. The Netherlands Society for Nature and Environment (SNM) suggested, however, that by 1995 the proposed measures were being implemented with difficulty and delay, if at all.³ Efforts to meet the emission reduction targets contained in voluntary agreements with industry were poorly monitored and the targets themselves were rarely met.⁴ Reducing emissions from road transport and methane emissions from manure also proved to be difficult, and numerous obstacles hampered the development of wind energy and biomass conversion programs.⁵

¹ Ministry of Housing Spatial Planning and Environment. 2002. *The Progress of the Netherlands Climate Change Policy: an Assessment at the 2002 Evaluation Moment*. Den Haag: Ministry of Housing, Spatial Planning and Environment. Most ghg reductions were for methane, which declined due to recovery of landfill gas, less dumping of organic waste, and a decrease in livestock populations.

² Climate Action Network. 1997. *Independent NGO Evaluations of National Plans for Climate Mitigation - OECD Countries: Fifth Review, October 1997*.

³ Climate Action Network. 1995. *Independent NGO Evaluations of National Plans for Climate Mitigation - OECD Countries: Third Review, January 1995*.

⁴ Rietbergen, M. G., J. C. M. Farla, and K. Blok. 2002. Do agreements enhance energy efficiency improvement? Analysing the actual outcome of long-term agreements on industrial energy efficiency improvement in The Netherlands. *Journal of Cleaner Production* 10, 2: 153-163; van Rooijen, Sascha and Mark van Wees. 2003. *Green Electricity Policy in the Netherlands*. Oslo, Norway: Center for International Climate and Environmental Research.

⁵ Climate Action Network. 1997. *Independent NGO Evaluations of National Plans for Climate Mitigation - OECD Countries: Fifth Review, October 1997*; Westhoek, H., R. van den Berg, W. de Hoop, and A. van der Kamp. 2004. Economic and environmental effects of the manure policy in The Netherlands: synthesis of integrated ex-post and

As in the United States, many aspects of Dutch climate policy were formulated and implemented in several overlapping policy subsystems. Most of these overlapping subsystems were national, provincial, or municipal subsystems. Unlike in the United States, however, the Dutch climate policy subsystem was also overlapped by two EU-wide subsystems: an EU climate policy subsystem in which the climate policies of 15 (as of 1995) EU member states were coordinated and an EU tax policy subsystem in which an EU energy/carbon tax proposal was considered.

This case study examines the dynamics that occurred between 1988 and 1997 within Dutch national climate policy subsystem, the EU climate and tax policy subsystems, the Dutch domestic tax policy subsystem in which a proposal for an expanded energy levy was pursued, and the Dutch energy policy subsystems in which a proposed wind energy program was developed and implemented. Figure 9.1 depicts these overlapping subsystems.

9.2 THE DUTCH CLIMATE POLICY SUBSYSTEM

As in the other subsystems, climate policy in the Netherlands was driven by two competing coalitions: an Economic Growth Coalition and a Precautionary Coalition. These coalitions held similar beliefs and had many of the same members as their counterparts in the international and U.S. climate policy subsystem. Unlike the other subsystems, however, the Precautionary Coalition was able to dominate the subsystem through all three phases of the policy process between 1988 and 1997.

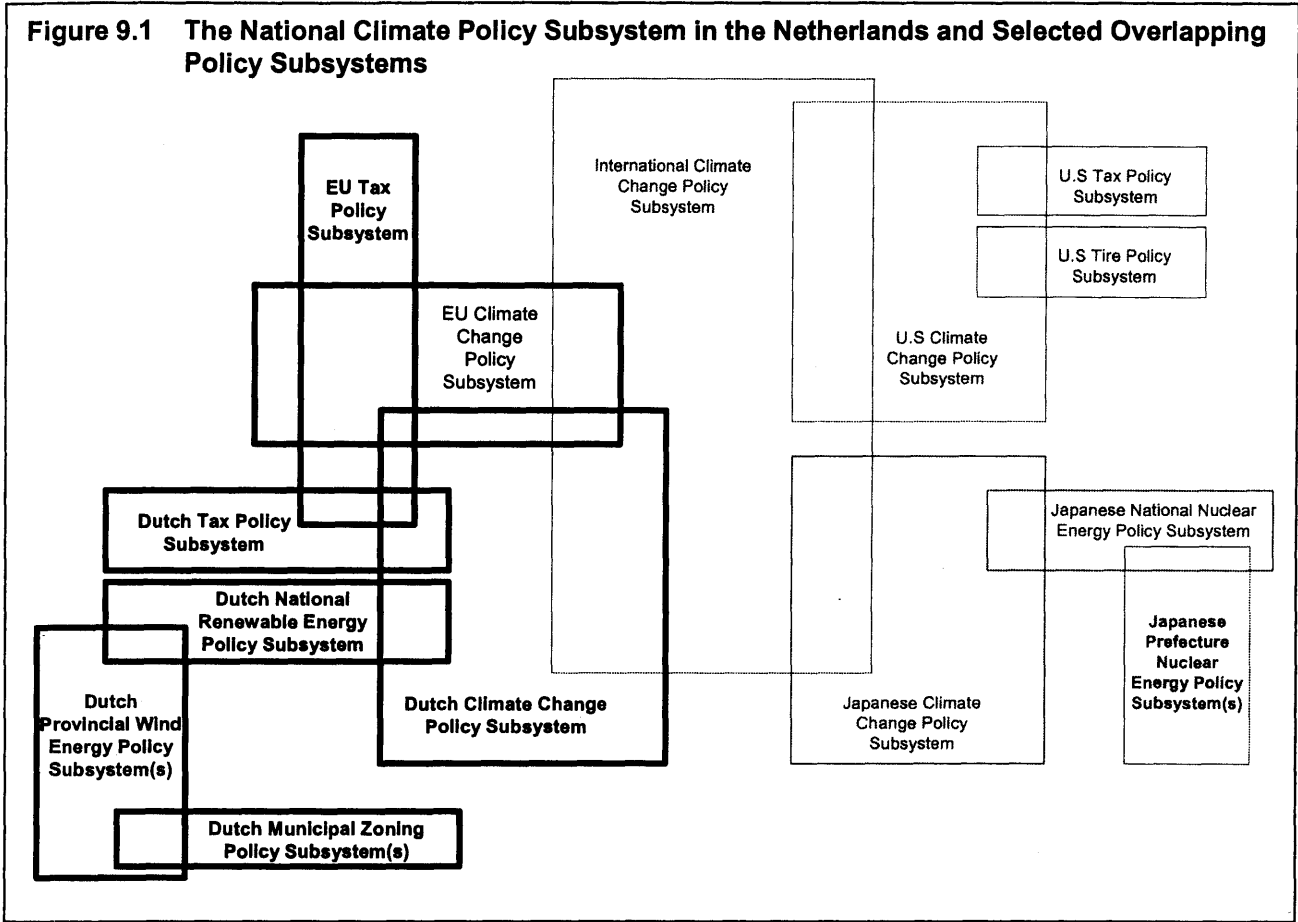
9.2.1. Phase I: 1987-1990

The Netherlands' climate change policy has its roots in the environmental planning process initiated by VROM in 1982. At that time, VROM began to prepare rolling three-year Environmental Programs, updated yearly, that established general guidelines for the Ministry's activities. This planning process was expanded in 1984 to become the National Environmental Policy Plan (NEPP). Although the first NEPP was supposed to be released in 1986, it was delayed first until 1987, and then until 1988.⁶ In 1988, the National Institute for Public Health and Environmental Protection (RIVM) released report entitled Concern for Tomorrow, which was a comprehensive review of country's environment and forecast of future conditions.⁷ This

ex-ante evaluation. *Water Science and Technology* 49, 3: 109-116; Wolsink, Maarten. 1996. Dutch wind power policy: Stagnating implementation of renewables. *Energy Policy* 24, 12: 1079; Wolsink, Maarten. 2000. Wind power and the NIMBY-myth: institutional capacity and the limited significance of public support. *Renewable Energy* 21, 1: 49-64; Junginger, M., S. Agterbosch, A. Faaij, and W. Turkenburg. 2004. Renewable electricity in the Netherlands. *Energy Policy* 32, 9: 1053-1073; Raven, R. P. J. M. 2004. Implementation of manure digestion and co-combustion in the Dutch electricity regime: a multi-level analysis of market implementation in the Netherlands. *Energy Policy* 32: 29-39.

⁶ Bennett. 1991. The History of the Dutch National Environmental Policy Plan.

⁷ The report, which was commissioned by VROM, looked at carrying capacity of Dutch environment, predicted that pollution would need to be reduced by 70 to 90 percent by 2010 in order to remain within carrying capacity of the Dutch environment.



report, together with several highly-visible events caused by pollution, galvanized public support for environmental reform.⁸

Among the threats highlighted by the RIVM report was catastrophic flooding as a result of climate change and sea level rise. This threat was a major factor in the decision by the Dutch government to advocate strong actions to reduce emissions of greenhouse gases internationally as well as within the Netherlands. Later that year, VROM and other members of the precautionary coalition in the Netherlands helped Environment Canada organize the Toronto Conference and draft the Conference Statement, which call for a 20 percent reduction in global CO₂ emissions from 1988 levels by the year 2005.⁹ Among the conference participants, was Environment

⁸ The release of the RIVM report coincided with the death of 14,000 North Sea harbor seals in a distemper epidemic after their immune systems were weakened by water pollution. These events motivated Queen Beatrix to make the environment a major point in her 1988 Christmas Address. She warned the Dutch people that “the earth is slowly dying and the inconceivable – the end of life itself – is actually becoming conceivable.” Raun. 1989. Flood Tide of Environmental Concern Engulfs The Dutch .

⁹ Proceeding of the World Conference on the Changing Atmosphere: Implications for Global Security, Toronto, June 27-30, 1988. WMO Doc. 710.

Minister Nijpels, who used the opportunity to announce that the Netherlands would host a ministerial meeting the following year on climate change.¹⁰

VROM, together with the Ministry of Foreign Affairs, began planning for the Ministerial Conference immediately following the Toronto meeting. As a prelude to this meeting, which was to be held in Noordwijk, the Dutch government, together with France and Norway, sponsored a summit meeting in The Hague on global environmental issues.¹¹ Although this meeting addressed a broader range of environmental issues than just climate change, one of its purposes was to develop a consensus among the EU countries on the Toronto target.¹²

As planning for the Noordwijk meeting progressed, VROM was also nearing completion of the first NEPP. VROM, in consultation with other ministries, altered the NEPP to address each of the issues raised by the RIVM report, and set an initial long-term goal of restoring the Dutch environment within 25 years.¹³ To address climate change, the plan called for emissions of CO₂ in the Netherlands to be stabilized at the 1990 levels by 2000. However, this proposal was widely criticized in the media and by environmental groups as inadequate given the threat that climate change posed to the Netherlands and the statements that Nijpels had made in Toronto.

By March of 1989, agreement had been reached on the NEPP within the government, although with some reluctance on the part of ministries such as the Ministry of Economic Affairs and the Ministry of Transport. With the environment becoming an important issue for the 1990 elections, few ministers wanted to appear recalcitrant, particularly since they had endorsed the concept of the NEPP as a comprehensive environmental plan several years earlier.¹⁴

As details of the plan became known, members of the economic growth coalition began to express concerns over its cost. As presented to parliament, the NEPP would require additional government expenditures of about \$3 billion from 1990 to 1994, and the total cost of the plan was projected to be as much as \$200 billion by 2015.¹⁵ However, 80 percent of cost of the plan, which was based on the "polluter pays" principle, was to be met by industries and consumers. During negotiations within the government, Minister of Finance Onno Ruding had expressed concern about the high costs of NEPP and about the rather vague agreements on how some of the plan's measures would be financed.¹⁶ As it was being presented to parliament, industry groups such as VNCI also expressed concern over its cost.¹⁷

¹⁰ Interview #53. Ministry of Housing, Spatial Planning and the Environment, Netherlands. Jan., 1998.

¹¹ Representatives of twenty-four countries, including seventeen heads of state or government, attended the meeting. However, the United States, the Soviet Union, and Japan were not invited.

¹² Interview #53. Ministry of Housing, Spatial Planning and the Environment, Netherlands. Jan., 1998.

¹³ The NEPP process consisted of four distinct types of plans: a long-term plan that set out general environmental goals for the country, a 10-year strategic national plan that established general policies that would achieve these objectives; rolling operational plans, prepared every four years but updated annually, for implementing these policies, and corresponding strategic and operational plans prepared by regional and local authorities. The NEPPs themselves needed to be approved by Parliament. (Bennett. 1991. *The History of the Dutch National Environmental Policy Plan*).

¹⁴ Bennett. 1991. *The History of the Dutch National Environmental Policy Plan*.

¹⁵ Bennett. 1991. *The History of the Dutch National Environmental Policy Plan*.

¹⁶ Raun, Laura. Dutch Environmental Plan Near Completion. *Financial Times*, Apr. 25, 1989. 1 pg. 2.

¹⁷ 1989. Dutch chemical companies worry over added environmental costs. *Platt's Petrochemical Report*, Mar. 9,

When the plan was presented to Parliament in April of 1989, members of the Liberal party supported Ruding's criticisms even through the party's own ministers in the cabinet, including Environment Minister Nijpels, had approved the plan. In particular, the Liberals opposed a proposed increase in a duty on gasoline and diesel fuel and an end to the existing tax deduction for commuting to work by private car. They viewed this proposal as unfair, as it forced motorists, and commuters in particular, to bear substantially higher costs in order to finance the plan.

Despite the opposition from within their own party, the Liberal cabinet ministers continued to support the plan. Led by Prime Minister Lubbers, a Christian Democrat, both the Liberal and the Christian Democrat cabinet ministers approved the plan on April 29, 1989. Three days later, the Liberal party called for the cabinet to withdraw the proposals for increasing the duty on gasoline and diesel fuels and for abolishing the tax concessions on commuting by private car and announced that they would withdraw their support from the coalition government if the motion were not accepted.¹⁸ When Lubbers refused to do so, the Liberals introduced a motion of no confidence. When with the cooperation of the opposition Labor party, Lubbers was forced to offer the resignation of cabinet. Queen Beatrix accepted it and called for new elections to be held in September. Although the NEPP was published on May 25, 1989, debate and formal approval of the plan would need to until the new government was formed in September.

The Christian Democrats maintained their seats in the September elections, and Lubbers remained Prime Minister. However, the Liberals lost 5 of their 27 seats, in part because of their opposition to the NEPP.¹⁹ In September, all four major Parties accepted NEPP in its existing form, but advocated tightening timetable for reducing GHGs. Although all four parties accepted the basic framework of the NEPP, they called for a number of adjustments to be made in it to reflect commitments made during the elections. In particular, they sought a tightening of the timetable for reducing CO₂ emissions. The process of amending the plan, which was to become known as NEPP+, would take an additional nine months.

As VROM was moving ahead with revisions to the NEPP, it was also proceeding with its efforts to elicit commitments to emission reductions from other countries at the Noordwijk Ministerial Conference on Atmospheric Pollution and Climate Change in November of 1989. This meeting was notable in that it was the first high-level meeting focusing specifically on climate change. VROM used its network of contacts within environment ministries to negotiate a draft ministerial statement prior to meeting.²⁰ Initial declaration had called for **(insert statements)**. When this formulation was rejected by the United States, Japan, and the Soviet Union, the declaration was revised to call for industrialized countries to stabilize their ghg

1989.

¹⁸ The dispute over the car tax was actually just final straw in long series of disputes between the Liberals and the Christian Democrats. The Liberals were the smaller of the two parties in the coalition government, and had felt that they were consistently being shortchanged by Lubbers, a Christian Democrat. Liberals objections were regarded as effort to protect car users from a progressive environmental policy (Raun, Laura. Dutch Government to Quit Over Plan for Environment. *Financial Times*, May 3, 1989. 1 pg. 22).

¹⁹ Cody, Edward. Lubbers' Party Wins Again In Dutch Vote; Antipollution Drive Seen as Key Issue. *Washington Post*, Sept. 7, 1989. A pg. 31.

²⁰ Interview #53. Ministry of Housing, Spatial Planning and the Environment, Netherlands. Jan., 1998.

emissions “as soon as possible.” However, it also noted that the view of “many” industrialized countries that stabilization should be achieved “as a first step at the latest by the year 2000.”

The NEPP+, published in June of 1990, called for emissions of CO₂ to be stabilized at 1989/1990 levels by 1994/195 and reduced by 3 to 5 percent by 2000.²¹ The cost of plan was estimated to be about \$8.5 billion, 50 percent of which would be funded by government.²² Petroleum and fuel oil taxes were increased in January of 1990 to raise the necessary revenue. In response to these developments, industrial and agricultural groups began to become concerned about the economic risks of moving too far ahead of other EU countries, particularly with regard to CO₂ emissions. However, environmental groups continued to criticize the plan as a retreat from 10 percent reduction promised in Toronto.²³

9.2.2. Phase 2: 1990-1994

The second phase of the Dutch climate policy process was marked by the implementation of the NEPP+, the preparation of NEPP-II, and the submission of the Netherlands' National Report under the FCCC. Problems with implementation of the NEPP+ became apparent soon after it was adopted. By early 1991, only small number of 228 mostly voluntary measures in plan had been put into effect. There were a number of reasons for this. Environmental policy makers and pollution control authorities had limited capability to implement many of the measures, as many were in the form of voluntary agreements, or covenants, with various industries.²⁴ These industries and other target groups were also not prepared to respond quickly to the measures contained in the plan.²⁵ Finally, there were some instances, such as the expansion of Schipol airport in Amsterdam, in which decisions were made that clearly fell short of objectives of NEPP.²⁶

VROM released the Second National Environmental Policy Plan, the NEPP-II, in December 1993. The NEPP-II employed four basic mechanisms for reducing emissions: standards and regulations, subsidies, taxation, and voluntary agreements. Notably, most of these policies had been prepared by VROM with only limited involvement from other ministries and stakeholders.²⁷ The standards and regulations focused primarily on building codes and appliance standards, while the subsidies were intended to promote energy efficiency and the development of alternative energy sources. In addition, voluntary agreements with a number of industrial sectors

²¹ Bennett. 1991. *The History of the Dutch National Environmental Policy Plan*.

²² Spinks, Peter. Dutch back green plan. *Guardian*, Aug. 2, 1990.

²³ Bennett. 1991. *The History of the Dutch National Environmental Policy Plan*.

²⁴ Covenant is civil contract giving industry more control over the interim goals and measures used to fulfill the governments targets. Under covenants, government specifies results to be achieved by a certain deadline, but allows industries to choose the mix of technological, economic, and planning measures they will used to achieve the result. This allows industries to choose the most efficient measures and integrate environmental modifications into their business planning. As of 1995, over 100 covenants had been established (OECD. 1995. *Environmental Performance Review 1995*. Paris: OECD).

²⁵ It had been calculated that a 20 percent increase in industrial energy efficiency would be necessary to achieve the 2000 target of a three percent reduction of CO₂ emissions (Kasa. 2000. *Explaining emission tax exemptions for heavy industries: A comparison of Norway, Denmark and the Netherlands*).

²⁶ Bennett. 1991. *The History of the Dutch National Environmental Policy Plan*.

²⁷ van Rooijen and van Wees. 2003. *Green electricity policy in the Netherlands*.

would be strengthened, and a number of different mechanisms would be used to improve energy use in the transport sector. However, the main instrument through which the Netherlands would fulfill its pledge of reducing CO₂ emissions by 3 percent before 2000 was to the proposed regulatory energy levy. VROM recommended that it be imposed unilaterally by 1996 if an EU-wide energy tax was not imposed before then.²⁸

In August 1994, the “purple coalition” of the Labor Party, the Democrats 66 Party, and the Liberal Party (VVD) replaced the Christian Democrats as the governing coalition. Wim Kok of the Labor Party became prime minister. Although this new government upheld the tax proposal, it limited the energy price increase to 15 to 25 percent, and large energy-intensive industries remained exempt.²⁹ Unexpectedly, this exemption caused some members of Parliament to rebel against the proposal, forcing the government to make some additional adjustments in order to gain the parliament’s approval. The NEPP-II was approved in December of 1994 after it was agreed that the levy would not come into effect until January of 1996.³⁰ It should be noted here, however, that approval of the NEPP-II did not constitute approval of the energy levy itself, which would also require approval by Parliament before it could take effect.

The NEPP-II became the basis for the 1994 Netherlands’ National Communication on Climate Change Policies.³¹ The plan as described in the National Communication was considered to be one of the most aggressive of the national climate plans. It was also one of few in which policies and measures are described that could come close to achieving the stated emissions reduction target of a 3 to 5 percent reduction in greenhouse gas emissions from average 1990 levels by the year 2000.³² A list of these measures is contained in Table 9.1.

9.2.3. Phase 3: 1994-1997

Phase 3 of the Dutch Climate Policy Subsystem was focused primarily on the negotiations of the Kyoto Protocol. The positions of the Netherlands in these discussions were coordinated by International Affairs Coordination (CIM) committee, which was convened by the Ministry of Foreign Affairs. However, this committee was heavily dependant on VROM to do much of the work, as the MOF had only two people dedicated to the issue.³³ VROM, on the other hand, had established a substantial taskforce to work on the negotiations.³⁴

²⁸ Kasa. 2000. *Explaining emission tax exemptions for heavy industries: A comparison of Norway, Denmark and the Netherlands*.

²⁹ Although the Liberal Party opposed the levy, it accepted the proposal in exchange for other concessions in the coalition agreement (Kasa. 2000. *Explaining emission tax exemptions for heavy industries: A comparison of Norway, Denmark and the Netherlands*).

³⁰ See the OECD Environmental Performance Review for the Netherlands for an overview of the NEPP 2 and a general discussion of Dutch environmental policy (OECD. 1993. *OECD Environmental Performance Reviews: Netherlands*).

³¹ Netherlands. 1994. *Netherlands' National Communication on Climate Change Policies*.

³² Climate Action Network. 1995. *Independent NGO Evaluations of National Plans for Climate Mitigation - OECD Countries: Third Review, January 1995*.

³³ Among other things, the MOF relied on VROM to prepare the agenda and background papers for CIM meetings. (Interview #42. Ministry of Foreign Affairs, Netherlands. Feb., 1998).

³⁴ van Harmelen, Boomsma, and Korenromp. 2000. *Building Bridges, Building Dikes: an evaluation of the Dutch policy-making on climate change*.

Table 9.1. Policies and Measures Contained in the Netherlands' National Communication on Climate Change Policies

POLICY/MEASURE	RESPONSIBLE AGENCY
Consultations regarding energy conservation for electricity generation	VROM
Promotion of wind energy, energy from waste incineration	MEA, VROM
Vehicle taxes, road taxes, excise taxes to improve automobile construction and use	MOF, MOT, VROM
Improved spatial planning and parking policies	VROM
Long Term Agreements for efficiency improvements for freight Transport	MEA, VROM
Improvements to alternative freight transport facilities	MOT, VROM
Energy registration and control system for the manufacturing sector	MEA, VROM
Long Term Agreement for efficiency improvements for manufacturing	MEA, VROM
Restrictions on landfilling and energy recovery	VROM
Long-Term Agreements to improve energy efficiency in commercial buildings	VROM
Energy efficiency standards for new buildings	VROM
Energy efficiency program for government buildings,	VROM
Long-Term Agreements to improve energy conservation in subsidized housing	VROM
Higher insulation and energy efficiency standards for private housing	VROM
Long-Term Agreements to improve energy efficiency in agriculture	Min. Agriculture, VROM
Extension of forest cover through subsidies to farmers	Min. Agriculture, VROM
Long-Term Agreements for energy conservation in energy distribution sector	MEA, VROM
Cogeneration, district heat recovery of industrial heat	MEA, VROM

By April 1995, voluntary covenants for energy efficiency had been established with 22 of 35 major industrial sectors. Most covenants required a 20 percent reduction of CO₂ emissions by 2000, with the Ministry of Economic Affairs providing financial assistance for new investments and research and development.³⁵ In June 1995, however, the Central Planning Bureau and RIVM reported that energy consumption would rise significantly in coming years as result of strengthening economy and low energy prices.³⁶ Environment Minister Margreet de Boer promised in reaction to these reports to limit a rise in energy consumption, but was forced to concede in October 1995 that a reduction in CO₂ emissions of 5 percent below 1990 levels by 2000 would not be feasible, and that the Netherlands would aim for a 3 percent reduction.

Within the CIM, VROM continued to push for aggressive commitments. Both the Ministry of Economic Affairs and the Ministry of Finance, however, were concerned about the effect of targets on the Dutch economy. In addition, the MEA stressed the importance of achieving some of these reductions abroad. Although neither ministry was fully engaged on the issue, these differences prevented the CIM from reaching an agreement on a new emissions reduction target.³⁷ VROM also had some concerns about means for achieving a post-2000 target, and began to push harder for discussion of agreements on specific policies and measures (PAMs) in international discussions.³⁸

In the summer of 1996, the Dutch cabinet set up a steering committee made up of representatives from Ministries of Economic Affairs, Environment, Agriculture and Transport to

³⁵ OECD. 1995. *Environmental Performance Review 1995*.

³⁶ Interview #44. Netherlands Academy of Sciences, Netherlands. Feb., 1989.

³⁷ Interview #42. Ministry of Foreign Affairs, Netherlands. Feb., 1998; Interview #40. Ministry of Economic Affairs, Netherlands. Feb., 1997.

³⁸ Interview #46. Ministry of Housing, Spatial Planning and the Environment, Netherlands. Feb., 1998.

examine additional measures for reducing CO₂ emissions.³⁹ That September, the committee reported that emissions had risen 7 percent from 1990 to 1995 due largely to economic growth and increased energy consumption, and that CO₂ emissions increased by 3.9 percent in 1995. In reaction to this report, MPs from Labor and the D66 parties, together with opposition Christian Democrats and Green Parties, called for the cabinet to allocate additional funds to emission reduction efforts. The stalemate within the government regarding a post-2000 target continued, however, with both the MEA and MOF wanting the government to wait until the United States had set its target before announcing their own.⁴⁰

Unable to reach agreement within the government on a national emissions reduction target, VROM shifted its focus in late 1996 to trying to get agreement on an EU-wide target and burden-sharing agreement when it took over the EU Presidency in January 1997.⁴¹ VROM began working with State University of Utrecht to develop an analytical approach for determining differentiated targets within EU. With the assistance of this “Triptique” model, VROM was able to forge an agreement with other EU countries on a set of targets that added up to an EU-wide reduction of about 10 percent below 1990 levels by 2010.⁴² Under this EU “bubble agreement,” the Netherlands also would have a target of 10 percent below 1990 levels. On March 23, 1997, this agreement was endorsed by the EU Environmental Council, which, also, called for all industrialized countries to reduce emissions by 15 percent below 1990 levels by 2010.

Although the Netherlands relinquished the EU Presidency to Luxembourg in June of 1997, it continued to play a leadership role in the AGBM process. Because Luxembourg had only a limited capacity to negotiate on behalf of the EU, a troika of Luxembourg, the Netherlands as Luxembourg’s predecessor, and the United Kingdom and its successor, led the negotiations at COP 3. Thus Dr. Bert Metz, the head of VROM’s climate change unit, became one EU’s chief negotiators in Kyoto. Close coordination took place at this point between VROM and the network of Dutch environmental NGOs. When proposals from the United States or other JUSCANZ countries were put forward during closed negotiating sessions, someone from the delegation informed someone from one of the NGOs (usually WWF, Friends of the Earth, or Stichting Natuur en Milieu). They in turn used the CAN network to apply pressure against the

³⁹ Dutch budget for decreasing CO₂ emissions. *Power Europe*, Sept. 20, 1996. pg. 25.

⁴⁰ Interview #42. Ministry of Foreign Affairs, Netherlands. Feb., 1998.

⁴¹ The President of the Council is responsible for determining the agenda of the Council, chair sessions of preparatory groups and to co-ordinate and represent the EU and its member states in international negotiations. Thus VROM becomes responsible for setting the agenda for the EU Environment Council when the Netherlands holds the Presidency (Oberthur and Ott. 1999. *The Kyoto Protocol: International climate policy for the 21st century*).

⁴² The approach, known as “Triptique” separated the economies of member countries into three broad economic sectors: the domestic sector, heavy industry, and electricity generation. Emission targets were calculated by adding up individual allowances for each sector and by taking into account economic growth, population changes, and climate-adjusted energy use (Blok, K., G. J. M. Phylipsen, and J. W. Bode. 1997. *The Triptique Approach: Burden Differentiation of CO₂ Emission Reduction Among European Union Member States*. Utrecht: Department of Science, Technology and Society, Utrecht University). Notably, the Triptique model was developed entirely within VROM; no other ministries were involved (van Harmelen, Boomsma, and Korenromp. 2000. *Building Bridges, Building Dikes: an evaluation of the Dutch policy-making on climate change*). See also Berdowski, Jan, Michael Gager, Bernhard Raberger, Manfred Ritter, and Antoon Visschedijk. 1999. *Overview of National Programmes to Reduce Greenhouse Gas Emissions*. Copenhagen: European Environment Agency.

proposal.⁴³ With this combined pressure, VROM was able to force the United States and Japan to accept targets well below those that these countries had put forward at the beginning of the Conference.

9.3 OVERLAPPING SUBSYSTEMS

The various policies and measures contained in the NEPP-II and the Dutch National Communication to the UNFCCC Secretariat were to be developed and implemented in a number of different overlapping national, regional, and local policy subsystems. Policy processes occurring within policy subsystems of the European Union also affected these measures.⁴⁴ The remainder of this chapter discusses the dynamics that transpired within the EU policy subsystems that considered EU climate policy and an EU-wide energy tax. It then describes the dynamics of the Dutch national energy tax subsystem in which the national energy levy was considered. Finally, it discusses the dynamics occurring among the national renewable energy subsystem and overlapping regional wind energy subsystems and municipal zoning regulation subsystems, all of which were involved in the implementation of the Dutch Wind Energy program.

9.3.1. The EU Climate and Tax Policy Subsystems

EU policy related to climate change between 1988 and 1997 was determined in two overlapping subsystems: an EU climate policy subsystem and an EU tax policy subsystem. EU climate policies pertaining to the negotiations of the FCCC and the Kyoto Protocol were determined within the climate policy subsystem. However, the fate of an EU-wide energy/carbon tax, an important aspect of the EU's climate policy, was determined within an EU tax policy subsystem.

The EU climate policy subsystem was comprised of a wide range of actors, including representatives from the European Commission's Directorate-General on Environment (DGXI); the Directorate-General on Energy (DGXIII); the Council of Environment Ministers, the Council of Energy Ministers; representatives of environment, energy, economic, finance and other ministries of member states, and a panoply of NGO lobbyists.⁴⁵ These different actors and

⁴³ Interview #51. World Wide Fund for Nature, Netherlands. Feb., 1998; Interview #39. Ministry of Housing, Spatial Planning and the Environment, Netherlands. Feb., 1998.

⁴⁴ For a general discussion of the political dynamics of the European Union concerning environmental issues, see, e.g., Breckinridge, R. E. 1997. Reassessing regimes: The international regime aspects of the European Union. *Journal of Common Market Studies* 35, 2: 173-187; Cameron. 1995. Transnational relations and the development of European economic and monetary union. Eising. 2004. Multilevel governance and business interests in the European Union; Haigh, Nigel. 1999. European Union environmental policy at 25: retrospect and prospect. *Environment and Planning C-Government and Policy* 17, 1: 109-112; Hosli, M. O. 2000. The creation of the European economic and monetary union (EMU): intergovernmental negotiations and two-level games. *Journal of European Public Policy* 7, 5: 744-766; Kellow and Zito. 2002. Steering through complexity: EU environmental regulation in the international context; Sedelmeier, U. 2002. Sectoral dynamics of EU enlargement: advocacy, access and alliances in a composite policy. *Journal of European Public Policy* 9, 4: 627-649 Tallberg, J. 2002. Paths to compliance: Enforcement, management, and the European Union. *International Organization* 56, 3: 609-+.

⁴⁵ The European Commission, which functions as the executive branch of the European Union, is organized into Directorate Generals (DG). These were referred to by their number through most of the 1990s. Although DGXI (Environment). had primary responsibility for climate change, a number of other DGs also had partial

organizations formed two broad coalitions that paralleled the Precautionary and Economic Growth Coalitions of the Dutch and International Climate Policy Subsystems.⁴⁶ It was largely dominated by the Precautionary coalition, as the climate change issue was considered to be the purview of DGXI and the Environment Council.

The EU tax policy subsystem was also comprised of a wide range of actors. These included representatives from the European Commission's Directorate-General on Economic Analysis (DGII); the Directorate-General on Taxation (DGXXI); the Council of Economic and Finance Ministers (ECOFIN); and representatives of various other ministries of member states and NGOs. These different actors and organizations also formed two broad coalitions that paralleled the Precautionary and Economic Growth Coalitions of the Dutch and International Climate Policy Subsystems. However, it was largely dominated by the Economic Growth coalition, as taxation issues were the purview of DGII, DGXXI and ECOFIN.

The climate policy process was initiated in 1988 when DGXI proposed to the European Council that the European Community develop a common policy on climate change.⁴⁷ In June of 1990, a joint Council of Energy and Environment Ministers agreed that CO₂ emissions should be stabilized at 1990 levels within the EU as a whole by the year 2000.⁴⁸ That October, this joint

responsibility for aspects of climate change policy, including DGI, (external relations), DGII (economic analysis), DGIII (the internal market), DGVI (agriculture), DGVII (transportation), DGVIII (development aid), DGXII (research), DGXIII (energy), and DGXXI (taxation). The European Council of Ministers, which oversees, the Commission, is also organized into several Councils, including Environment Council, an Energy Council, a Finance Council, and others.

⁴⁶ It should be noted here that the determination that the EU climate policy subsystem was dominated by two major coalitions was not based on a detailed documents analysis, but a more general assessment based on interviews, document analyses conducted for other subsystems, and a review of the literature. Virtually all of the members of the International Precautionary Coalition who were from European countries also coordinated their activities in the EU climate policy subsystem. However, many actors and organizations participating in the EU Economic Growth Coalition were allied with members of the International Economic Growth Coalition but did not participate in the international policy process.

⁴⁷ The European Union has two basic approaches to environmental policies: introducing common policies at the EU level in areas in which it has exclusive competence (in which case power is transferred to the EU), and coordinating national policies in areas where it has mixed competence. Under the 1992 Treaty on the European Union, the EU has exclusive competence over trade related matters and mixed competence in areas of agriculture, transport and environmental protection. This mixed competence is subject to the principle of subsidiarity, which provides that the EU can take environmental measures only when the objective of environmental policy can be better achieved through joint action at the Community level (Ringius, L. 1999. *The European Community and Climate Protection: What's Behind the 'Empty Rhetoric'?* Oslo: Center for International Climate and Environmental Research). For a more detailed discussion of the evolution of EU climate policy, see, e.g., Gupta, Joyeeta and Nicolien van der Grijp. 2002. *European Union Leadership on Climate Change*. Amsterdam: Instituut voor Milieuvraagstukken, Vrije Universiteit; Gupta, Joyeeta and L. Ringius. 2000. *EU Leadership: Between Ambition and Reality*. Amsterdam: Instituut voor Milieuvraagstukken, Vrije Universiteit; Haigh, Nigel. 1996. *Climate Change Policies and Politics in the European Community*. In *Politics of Climate Change: a European Perspective*, ed. Tim O'Riordan and Jill Jaeger, pg. 155-185. London, New York: Routledge.

⁴⁸ This target not based on care analysis of existing and planned policies and measures, but general sense on the part of the Ministers that such a target was feasible (Ringius. 1999. *The European Community and climate protection: What's behind the 'empty rhetoric'?*).

Council formally committed the EU countries to this target and asked the Commission to develop a plan for achieving it.⁴⁹

The European Commission presented a plan for achieving the stabilization target to the Council of Ministers in May 1992. This plan, prepared jointly by DGXI and DGXIII, was composed of five elements:

- Energy efficiency improvements through the implementation of existing SAVE (Specific Actions for Vigorous Energy Efficiency) program proposals;
- Strengthening measures for promoting the dissemination of better energy conversion and use technologies through the THERMIE program;
- A program of support for renewable energy technologies;
- A combined energy/carbon tax, to be introduced at a level of three dollars per barrel of oil equivalent in 1993, rising by \$1 per year to level of \$10 in 2000; and,
- Additional unspecified measures to be taken by member states.⁵⁰

After heavy lobbying by members of the Economic Growth coalition, the Commission recommended that the imposition of the energy tax should be contingent on the implementation by the United States and Japan of identical taxes so that European industries are not put at competitive disadvantage. Energy-intensive industries and major exporters were also exempted from the proposed tax.⁵¹

At the urging of Environment Commissioner Ripa di Meana, most environment and energy ministers supported the carbon/energy tax proposal. At this point, however, the proposal was taken up within the EU tax policy subsystem, where it ran into significant difficulties. Despite intense lobbying from industry groups, economic and finance ministers from Denmark, Germany, Italy, Luxembourg, and the Netherlands supported the plan, including the imposition of the energy/carbon tax.⁵² However, ministers from the remaining countries rejected the proposed tax. France wanted only a carbon tax so that its nuclear industry would be protected. The United Kingdom opposed tax on principle, arguing that such a tax should be the responsibility of individual member countries. Poorer countries, Spain being the most vocal, opposed the plan because they feared it would burden their economies. Because the Maastrich Treaty required that

⁴⁹ This stabilization target implicitly acknowledged a need for differentiation among EU countries, as the EU itself could only facilitate the coordination of national climate policies. A number of countries, including the Netherlands, attempted to determine what this target would mean for individual states, but an agreement was never reached on specific numbers (van Harmelen, Boomsma, and Korenromp. 2000. *Building Bridges, Building Dikes: an evaluation of the Dutch policy-making on climate change*).

⁵⁰ van Rooijen and van Wees. 2003. *Green electricity policy in the Netherlands*.

⁵¹ EC Sets Energy Tax, but implementation hinges on U.S. and Japan adopting them. *Electric Utility Week*, May 25, 1992. pg. 7. The lobbying was sufficiently intense that EU Environment Commissioner Ripa di Meana described it as a "violent assault" (Newell and Paterson. 1998. *A climate for business: global warming, the state and capital*). See also Sebenius, James. 1994. *Towards a Winning Climate Coalition*. In *Negotiating Climate Change: The Inside Story of the Rio Convention*, ed. Irving M. Mintzer and J. Amber Leonard. Cambridge: Cambridge University Press.

⁵² Particularly vocal in its opposition to the tax was Europa, the European Petroleum Industry Association, which demanded proof that the tax would be the most economically efficient way of meeting the stabilization target (Newell and Paterson. 1998. *A climate for business: global warming, the state and capital*).

member countries be in unanimous agreement in order to impose any EU-wide fiscal measure such as the energy/carbon tax, the plan was rejected. This left Denmark, Germany and Netherlands as only countries with concrete plans on how to achieve the CO₂ stabilization target when the EU and its members signed the UNFCCC in June 1992.⁵³

The energy tax debate continued within the EU the following year as it contemplated ratification of the UNFCCC, but without resolution. The EU had to ratify the FCCC by December 31, 1993, if the agreement was to enter into force the following year. Germany, the Netherlands, Denmark, Belgium, France and Italy had been insisting that ratification be contingent on the adoption of EU-wide instruments such as an energy tax to ensure compliance, but dropped this demand as the December deadline loomed. The Environment Council ratified the UNFCCC on December 15, 1992, but without an energy tax. However, it requested that instruments for implementing the agreement be established by end of 1994.⁵⁴

In the fall of 1995, VROM began urging the Belgian government, which held the EU presidency at the time, to seek once again an agreement on an EU-wide CO₂ tax. The EU Council of Ministers debated the issue in November 1995. The United Kingdom remained opposed to it, however. In the face of this opposition, the EU formally abandoned its effort to establish a common CO₂ tax in December 1994. In doing so, ECOFIN declared that any member state desiring to do so could introduce an energy or CO₂ tax unilaterally.⁵⁵

In March 1995, DGXI prepared a working paper describing the current state of climate policy developments within the EU and putting forward proposals for policy options for the period 2005-2010. This detailed report of member states' attempts to reduce emissions showed that, while the EU would come close to stabilizing emissions in the 1990-1996 period, the primary reason that it would be able to do so was that reductions in UK and Germany had been offsetting increases in emissions from the remaining thirteen countries.⁵⁶ Given trends at the time, CO₂ emissions in the EU were expected to exceed 1990 levels by 5 to 8 percent by 2000.⁵⁷

When COP 1 convened the following month, EU Environment Ministers stated that the Berlin meeting should map out mandate for negotiations on a protocol to be completed by 1997, and called for internationally coordinated policies and measures (PAMs) for reducing ghg emissions.⁵⁸ The EU was facing a significant credibility problem, however, as the political goals outlined by the political leaders of member countries were widely viewed as being unrealistic and unachievable. Despite efforts by the Commission to show leadership on this issue, the EU

⁵³ Ringius. 1999. *The European Community and climate protection: What's behind the 'empty rhetoric'?*. In protest, Ripa de Meana, the EC environment commissioner, refused to participate in UNCED.

⁵⁴ 1994. EU Member States to Ratify Climate Convention Without Energy Tax. *Europe Energy*, Jan. 7, 1994.

⁵⁵ Environment Council abandons common CO₂ tax. *Europe Environment*, Dec. 20, 1994. pg. 45.

⁵⁶ Moreover, circumstances and policies largely unrelated to climate protection policies were the reasons for the reductions in both of these countries. Reductions in Germany were due in large part to the economic restructuring in the former East Germany, while reductions in the United Kingdom were the result of privatization in the energy sector (Berdowski, Gager, Raberger, Ritter, and Visschedijk. 1999. *Overview of National Programmes to Reduce Greenhouse Gas Emissions*).

⁵⁷ 1995. Commission Tables "Working Paper" on CO₂. *Europe Environment*, Mar. 6, 1995.

⁵⁸ 1995. EU to Push for Coordinated Measures in Climate Protocol.

Environment Council remained unable to reach agreement on specific PAMs or targets and timetables.⁵⁹

As preparations for COP 2 were underway in the spring of 1996, the EU Environment Council issued a statement concluding that “global average temperatures should not exceed two degrees above pre-industrial levels and that therefore concentrations levels lower than 550 ppmv should guide global limitation and reductions efforts.” Disagreement continued regarding specific targets, however. Germany, supported by Austria, the Netherlands and several other countries, proposed that all industrialized countries should reduce 1990 levels of CO₂ emissions by 10 percent by 2005 and by 15-20 percent by 2010. The United Kingdom and other countries continued to argue that a target should not be set until agreement had been reached on PAMs, and that targets should be differentiated.⁶⁰

With the Netherlands due to take over the Presidency in January 1997, VROM began to realize that the EU would be successful of the AGBM negotiations only if it could reach an internal agreement on targets and timetables, and that such an agreement would need to include differentiation among member states. Led by Bert Metz, VROM began working with the State University of Utrecht to develop an analytical approach for establishing these differentiated targets. The resulting “Triptique” approach enabled VROM to take the lead on negotiating a burden-sharing agreement within the EU.⁶¹ To show that these targets were achievable, VROM worked with DGXI to evaluate the effect of specific policies and measures, resulting in a report by the Commission that emissions of CO₂, CH₄, and N₂O could be reduced significantly by 2010 if all existing and planned policies and measures were implemented.⁶²

As a result of these efforts, the EU Environmental Council agreed in March 1997 on an EU “bubble” in which EU member states accepted individual national targets that collectively would reduce emissions of CO₂, CH₄, and N₂O by 10 percent from 1990 levels by the year 2010 (Table 9.2). The Environment Council went on to endorse the position that all industrialized countries

⁵⁹Prior to COP 1, Environment Commissioner Ritt Bjerregaard had asked that DGXI be given a mandate to coordinate the EU position in the climate change negotiations. This request was rejected, as environment ministers from many member states were reluctant to give the Commission additional power. This left progress on the development of EU climate policy dependent to a large degree on the country holding the rotating Presidency of the Council (Ringius. 1999. *The European Community and climate protection: What's behind the 'empty rhetoric'?*).

⁶⁰Oberthur and Ott. 1999. *The Kyoto Protocol: International climate policy for the 21st century*.

⁶¹Triptique was a bottom-up approach to differentiation that separated the economies of member countries into three broad economic sectors: the domestic sector, heavy industry, and electricity generation. Emission targets were calculated by adding up individual allowances for each sector and by taking into account economic growth, population changes, and climate-adjusted energy use (Blok, Philipsen, and Bode. 1997. *The Triptique Approach: Burden Differentiation of CO₂ Emission Reduction among European Union Member States*). Notably, other ministries were not involved in this effort (van Harmelen, Boomsma, and Korenromp. 2000. *Building Bridges, Building Dikes: an evaluation of the Dutch policy-making on climate change*). See also Berdowski, Gager, Raberger, Ritter, and Visschedijk. 1999. *Overview of National Programmes to Reduce Greenhouse Gas Emissions*.

⁶²European Commission. 1997. *Communication From the Commission: An Overall View of Energy Policy and Actions*. Brussels.

should reduce emissions by 15 percent below 1990 levels by 2010, although it was not clear how the additional 5 percent in emissions reductions would be achieved.⁶³

The EU Precautionary Coalition received a substantial boost in May of 1997 when Tony Blair's Labor Party replaced John Major's Conservative Party as the governing party in the

Table 9.2 EU Targets as of March, 1997

Member	Target (CO ₂ , CH ₄ , N ₂ O)
Austria	-25
Belgium	-10
Denmark	-25
Finland	0
France	0
Germany	-25
Greece	+30
Ireland	+15
Italy	-7
Luxembourg	-30
Netherlands	-10
Spain	+17
Sweden	+5
Portugal	+40
United Kingdom	-10

United Kingdom. Not only was this new government more inclined towards working cooperatively with the rest of Europe, but also went on to immediately fulfill its campaign pledge to set a national goal reducing CO₂ emissions by 20 percent by 2010.⁶⁴ This shift paved the way for an Environment Council agreement in June 1997 that an interim target should be set at 7.5 percent reduction by 2005, half of the 2010 reduction. It also agreed that member states could use emissions trading to achieve their targets, but it was to be supplemental to domestic action.⁶⁵

The United Kingdom, Luxembourg, and the Netherlands worked closely together to coordinate the EU position in the AGBM negotiations after Luxembourg took over the EU Presidency in the second half of 1997. During COP 3, UK Deputy Prime Minister John Prescott became the *de facto* negotiator for the EU. Bert Metz and other VROM staff also played an important role in the discussions. Despite this leadership, however, all negotiating positions had to be formally approved by all member states during internal coordination meetings. Because consensus was required, this became a time-consuming and difficult process.⁶⁶

During the final hours of negotiations, UK Prime Minister Blair and German Chancellor Kohl became personally involved in the discussions, reaching out to the heads of other member

⁶³ :van Harmelen, Boomsma, and Korenromp. 2000. *Building Bridges, Building Dikes: an evaluation of the Dutch policy-making on climate change*.

⁶⁴ Oberthur and Ott. 1999. *The Kyoto Protocol: International climate policy for the 21st century*.

⁶⁵ Yamin, Farhana. 2000. The Role of the EU in Climate Negotiations. In *Climate Change and European Leadership*, ed. Joyeeta Gupta and Michael Grubb, pg. 47-66. Dordrecht: Kluwer Academic Publishers.

⁶⁶ Delegates from member states not directly involved in the final negotiations began to feel excluded from the discussions, and frequently complained that concessions were being made too easily. Danish Environment Minister Svend Auken was particularly outspoken in complaining about the conduct of the EU negotiators (Oberthur and Ott. 1999. *The Kyoto Protocol: International climate policy for the 21st century*).

states in an effort to ensure an agreement on such critical issues as emissions trading and the inclusion of certain categories of sinks. By the end of the conference, the EU, Japan, and the United States were able to reach an agreement on emissions reduction targets of 8 percent, 7 percent and 6 percent, respectively, below 1990 levels by 2012. These targets that, while not as aggressive as those that the EU had called for the previous March, were much lower than the stabilization target espoused by the United States.⁶⁷

Once the 8 percent target for the EU had been established, member states had to once again negotiate among themselves to reach an agreement on targets for each member state. Even though an analytical approach was again used for this, the negotiations were as difficult as they

Table 9.3. EU Targets as of March 1997 and resulting from the Kyoto Protocol

	March 1997 target (CO ₂ , CH ₄ , N ₂ O)	Final Kyoto target (6 gases)
Austria	-25	-13
Belgium	-10	-7.5
Denmark	-25	-21
Finland	0	0
France	0	0
Germany	-25	-21
Greece	+30	+25
Ireland	+15	+13
Italy	-7	-6.5
Luxembourg	-30	-28
Netherlands	-10	-6
Spain	+17	+15
Sweden	+5	+4
Portugal	+40	+27
United Kingdom	-10	-12.5

had been earlier. This was due in part to the involvement of a number of players, particularly from the Economic Growth Coalition, who had not participated in the earlier discussions. In June of 1988, EU member states reached an agreement on the individual targets that would constitute the EU's 8 percent target (Table 9.3). For its part, VROM was forced by the MOE and MOF, which had not participated in the development of the Triptique model, to argue for a target of 6 percent below 1990 levels rather than the 10 percent figure accepted the previous year.⁶⁸

9.3.2. The Dutch Energy Tax Policy Subsystem

As with other national policy issues, tax policy in the Netherlands is developed through a very complex process of negotiations among multiple actors within what can be called the Dutch energy tax policy subsystem. Among these actors were VROM, the Ministry of Economic Affairs, the Ministry of Finance, various political parties in Parliament, industry groups, and other NGOs. Although these actors held a wide range of interests and beliefs, they generally cooperated in two competing coalitions: a pro-tax coalition and an anti-tax coalition.

⁶⁷ Yamin. 2000. The role of the EU in climate negotiations; Gupta, Joyeeta and Nicolien van der Gruij. 2000. Perceptions of the EU's Role. In *Climate Change and European Leadership*, ed. Joyeeta Gupta and Michael Grubb, pg. 67-82. Dordrecht: Kluwer Academic Publishers.

⁶⁸ Interview #47. Ministry of Housing, Spatial Planning and the Environment, Netherlands. Feb., 1998.

Prior to 1992, the Ministry of Economic Affairs was the dominant player with regards to energy policy development, with other ministries playing very minor roles. VROM and the Ministry of Finance gained some influence in the mid-1990s, although MOE retained formal authority for energy policy. Industry groups, which had close ties to MOE, also had a substantial influence on energy policy.⁶⁹ On the other hand, environmental NGOs and consumer groups had a much more limited role, focusing more of their attention on EU-wide energy policies.⁷⁰

In early 1992, VROM began to consider means both to make additional emissions reductions and to find additional ways to pay for the NEPP+. This was proving to be difficult, as the economic climate in the Netherlands was different than it had been four years earlier and agreements had already been reached with most of those target groups that are easily organized.⁷¹ Among the measures that it proposed were an environmental levy on fuel and a regulatory energy levy.⁷² At this point, the EU was considering an energy tax that would apply to all countries within the community (see Section 9.3.1). However, VROM proposed that these taxes be imposed unilaterally.

These proposals caused a significant fissure within the Dutch government. The regulatory energy levy proved particularly divisive, with industry and the Ministry of Economic Affairs arguing that the levy was equivalent to raising labor costs by 15 to 20 percent, and that these costs were being imposed on top of costs associated with implementing the voluntary agreements to reduce emissions.⁷³ Although VROM argued that the levy would be offset by reductions in other taxes, the Ministry of Economic Affairs and larger energy-intensive companies complained that they would not receive the same amount paid out and that a levy imposed unilaterally would have dire effects on investment and competitiveness.⁷⁴

As a compromise, the environment minister Hans Alders and economic minister Koos Andriessen agreed to appoint a commission to study effects that the levies would have on the Dutch economy in general and corporate sector in particular.⁷⁵ This commission, known as the Wolfson Commission, issued its report in February of 1992. It concluded that in the absence of a tax at the EU level, a domestic energy tax could have substantial negative effects on energy-

⁶⁹ Newell and Paterson. 1998. A climate for business: global warming, the state and capital.

⁷⁰ van Rooijen and van Wees. 2003. *Green electricity policy in the Netherlands*; Interview #45. Mileau Defens, Netherlands. Feb., 1998.

⁷¹ While the first NEPP was published when the economy was growing at 4 percent, economic growth in 1993 was negligible (1993. Going Dutch. *Economist*, Nov. 10, 1993. pg. 82).

⁷² Revenues from environmental levies are used to fund environmental projects, while regulatory levies are returned to the corporate sector in other ways.

⁷³ Agreement on the environmental levy, which was known as WARM, was eventually reached after the government offered energy-intensive industries compensation in return for reductions in energy use, and it went into effect later that year.

⁷⁴ A number of major energy-intensive companies based in the Netherlands, including Shell, Hoogovens, KNP, Akso, DSM and Dow, threatened to transfer their investments abroad in the future if the government introduced a carbon tax. Some foreign companies based in the Netherlands also suggested that they may be forced to close down their Dutch plants if their parent companies consider them to be a drain on corporate resources. (Spinks, Peter. Multinationals get hot under the collar over Europe's carbon tax. *Guardian*, Mar. 20, 1992. pg. 31; Dutch plan for eco-energy levies enrages minister, major companies. *European Energy Report*, Feb. 7, 1992. pg. 2).

⁷⁵ Dutch government mulls incentives in return for energy efficiency. *European Energy Report*, Feb. 21, 1992. pg. 4.

intensive industries. If enacted unilaterally, it should be limited to small-scale users such as households and small consumers.⁷⁶ Prior to its release, however, Andriessen used leaked information from the report to reiterate his opposition to any unilateral increase in energy taxes. This galvanized sufficient opposition to the proposal that no further action was taken on it until VROM revived it the following year.⁷⁷

After VROM failed in its efforts to get an EU-wide energy/carbon tax enacted, it once again raised the idea of a unilateral Dutch energy tax in the NEPP-II when it was published in December 1993, promoting it as the main instrument through which the Netherlands would fulfill its pledge of reducing CO₂ emissions by 3 percent before 2000.⁷⁸ The Ministry of Economic Affairs and the Dutch employers union VNO-NCW immediately protested the inclusion of the tax measure. However, a substantially watered-down version of it was upheld when the “purple coalition” of the Liberal Party (VVD), Labor and Democrats 66 formed a new cabinet following the 1994 elections.⁷⁹ At the insistence of the VVD, it was agreed that the amount of the tax would be reduced to between 15 and 25 percent, and that large-scale users would remain exempt.⁸⁰ It was also agreed that the imposition of the tax would be put off until 1996, and that it would only be imposed if the EU failed to enact a similar EU-wide tax.

Debate within the EU energy tax subsystem regarding the unilateral imposition of the eco-levy resumed in 1995 after VROM’s efforts to gain approval of an EU-wide tax were unsuccessful. Most of this debate took place within Parliament, which had yet to approve the tax. In October 1995, the lower house of parliament took up consideration of the eco-levy. Under intense pressure from the Federation of Dutch Trade Unions (FNV), many MPs called for levy to apply to industrial energy users as well.⁸¹ After a complicated two-day debate, the government’s three coalition parties reached compromise agreement. Industrial users of gas would have to pay the tax, but a study would be conducted to determine if and when large-scale users of electricity would be required to do so. The horticultural industry, the only large-scale

⁷⁶ The Commission investigated the impacts of a tax that would increase energy prices by 25, 50 and 100 percent. Its analysis showed that if a tax were imposed on all energy use in a small, open economy such as the Netherlands, energy-intensive industries would simply relocate to countries that did not have the tax, thus incurring the costs of restructuring without affecting emissions. However, this tax would not cause this dislocation if it were applied only to small-scale energy use, and the study suggested that there might be a modest economic benefit (Kasa. 2000. *Explaining emission tax exemptions for heavy industries: A comparison of Norway, Denmark and the Netherlands*).

⁷⁷ Bovens, Geveke, and de Vries. 1995. *Open public administration in the Netherlands: The politics of leaking*.

⁷⁸ Kasa. 2000. *Explaining emission tax exemptions for heavy industries: A comparison of Norway, Denmark and the Netherlands*.

⁷⁹ While the Liberal Party opposed the energy tax, it accepted the proposal in exchange for other concessions in the coalition agreement. (Kasa. 2000. *Explaining emission tax exemptions for heavy industries: A comparison of Norway, Denmark and the Netherlands*).

⁸⁰ The exemption, a compromise between the VVD and its coalition partners, was justified on the basis that energy tax was to be subordinate and complimentary instrument to the long-term voluntary agreements with industry. Although the VVD generally opposed measures that favored some industries over others, energy-intensive industries were particularly influential in the party (Kasa. 2000. *Explaining emission tax exemptions for heavy industries: A comparison of Norway, Denmark and the Netherlands*).

⁸¹ As workers in labor intensive industries and the service sector increasingly dominated union membership, FNV saw the broadening of the CO₂ tax as beneficial for most of its members (Kasa. 2000. *Explaining emission tax exemptions for heavy industries: A comparison of Norway, Denmark and the Netherlands*).

users of gas, would be exempted from the tax on gas, although they would still be required to pay a tax on electricity use.⁸² The proposal passed the lower house on October 12, and was sent on to the upper house.

The upper house of parliament took up consideration of the tax proposal in December 1995. The D66 and Green parties, core members of the precautionary coalition, immediately supported it. Initially, many members of the Labor party opposed it out of concern about its effects on the poor. To gain the party's full support, the government agreed to conduct study on how to help low income families whose energy bills are high because they live in poorly-insulated housing. With the Christian Democrats firmly opposed to the tax, agreement by the VVD became crucial to the success of the proposal. With many VVD members concerned that the tax was being imposed unilaterally instead of Europe-wide, that it would affect competitiveness of industry, and that there was insufficient compensation for small and medium-sized companies, a vote on the proposal was delayed for several weeks.⁸³ Eventually, however, an agreement was reached, and the upper house passed the energy tax on December 20, 1995.

The new tax went into effect on January 1 1996. In its final form, electricity consumption exceeding 800 kWh was subject to tax of NLG0.035 per kWh. Natural gas consumption in excess of 800 m³ was taxed at rate of NLG 0.038 per m³. However, consumption above 50,000 kWh of electricity and 170,000 m³ of natural gas was not taxed, effectively exempting energy-intensive industries from having to pay the tax on much of its energy consumption.⁸⁴

9.3.3. Dutch Wind Energy Policy Subsystems

The development and implementation of wind energy policy in the Netherlands provides an example of the dynamics that can occur among overlapping national and subnational policy subsystems. This development and implementation took place through interactions among a national renewable energy policy subsystem, seven different provincial wind energy subsystems, and approximately 200 municipal zoning policy subsystems. General policies regarding renewable energy and mechanisms for implementing these policies (e.g., covenants, subsidies, and taxes) were set at the national level. These policies were implemented through voluntary agreements with regional energy production and distribution companies, which were responsible for constructing and operating the requisite wind turbines. However, decisions regarding the issuance of siting permits for these wind turbines were made at the local level in accordance with local zoning regulations.⁸⁵

⁸² Environmental tax on gas and electricity. *Power Europe*, Nov. 3, 1995. pg. 19.

⁸³ Dutch parliament postpones vote on disputed tax. *European Energy Report*, Dec. 5, 1995. pg. 5.

⁸⁴ Kasa. 2000. *Explaining emission tax exemptions for heavy industries: A comparison of Norway, Denmark and the Netherlands*.

⁸⁵ Land use planning in the Netherlands is driven by local zoning systems in which municipalities have instituted regulations stipulating building and land use requirements for various zones within the municipality. Local officials can only issue a building permit appropriate for the zone in which it is to be local. Because most zoning systems were not set up to accommodate wind turbines, the systems needed to be changed or a variance issued if the project developer is to be granted a building permit. Changing a zoning system or acquiring a variance is generally a lengthy process of public hearings and other public processes involving multiple agencies. Furthermore, those unhappy with the final outcome of these processes can appeal the decision in the courts. Although the central government has the authority to instruct local authorities about various aspects of local zoning

The Dutch national wind energy policy grew out of a research and development effort undertaken following 1973 energy crisis. During the 1980s, Dutch wind energy policy was set by a coalition of energy production companies; the MEA; SEP, which was the association of energy producers; and KEMA, a research organization funded by power distribution companies. In January 1985, the MEA initiated the Integrated Programme Wind Energy (IPW) program. This program consisted largely of subsidies from MEA and VROM that were intended to support domestic wind turbine manufacturers and stimulate the wind energy market.⁸⁶ After studies by the MEA of economically and technically viable sites, the MEA and VROM set a goal for the program of having 1000 Mw of wind energy operational by the year 2000. In setting this goal, they assumed that almost any site that was considered appropriate for wind turbines could actually be used for building them.⁸⁷

The IPW program failed to have the desired effect, as producers chose to import greater amounts of wind energy rather than to build new domestic facilities. By 1990, only 40 Mw of wind turbines had been installed in the Netherlands, far short of interim goal set by the IPW of 100-150 Mw by 1990.⁸⁸ A major reason for this was the difficulties and delays that energy producers encountered in finding sites on which to install turbines.⁸⁹ Numerous surveys had indicated that as much as 90 percent of the Dutch population approved of the increased use of wind power.⁹⁰ However, local residents vigorously opposed many of the proposed projects. A wide range of reasons were given for this opposition, including the noise, the flickering shadows created by the turning blades, and hazards posed to birds and other wildlife.⁹¹ Since virtually all siting proposals requiring changes to or variances from local zoning regulations, wind projects were delayed by months or years, and were often cancelled before ground was broken.

In late 1990, EnergyNed, the national association of energy distributors, developed Environmental Action Plan (MAP) to implement the voluntary agreements reached with the MEA and VROM under the NEPP+. To pay for the investments into energy conservation and renewable energy required by the NEPP+, the utilities were allowed to impose levy on distributed electricity.⁹² The MEA and VROM also signed an agreement with seven provincial electrical

schemes, this authority is rarely used in practice (Wolsink. 1996. Dutch wind power policy: Stagnating implementation of renewables).

⁸⁶ The subsidy provided by the MEA was a 35-40 percent subsidy on investments in newly built turbines, conditional upon the completion of the project, including the issuance of safety and operating certificates, in the year in which the subsidy was granted. This subsidy was reduced each year in expectation of turbine improvements and improved economic performance of windfarms. The subsidy issued by VROM consisted of an "environmental premium" (MilieuPremie). subsidy on capital investments in selected suitable areas as well as a bonus for low noise turbines (Junginger, Agterbosch, Faaij, and Turkenburg. 2004. Renewable electricity in the Netherlands).

⁸⁷ Wolsink. 1996. Dutch wind power policy: Stagnating implementation of renewables.

⁸⁸ Junginger, Agterbosch, Faaij, and Turkenburg. 2004. Renewable electricity in the Netherlands.

⁸⁹ Other problems were low buy-back tariffs and difficult demands put by utilities on turbine manufacturers.

⁹⁰ Krohn, S. and S. Damborg. 1999. On Public Attitudes towards Wind Power. *Renewable Energy* 16, 1: 954-960
Wolsink. 2000. Wind power and the NIMBY-myth: institutional capacity and the limited significance of public support.

⁹¹ Interview #44. Netherlands Academy of Sciences, Netherlands. Feb., 1989
Wolsink. 1996. Dutch wind power policy: Stagnating implementation of renewables.

⁹² Up until 1989, the same provincial and regional energy production companies that generated electricity handled its distribution. This provided SEP, the national association of energy producers, with effective control of national

that called for up to 3,000 turbines that would generate 1,000 Mw of electricity by 2000, an increase of more than 7 percent over the 1990 output.⁹³ These seven utilities developed a project called Stichting Windplan, to coordinate the effort, and pledged to invest an additional 250 Mw by the year 1994 beyond what was required by the initial agreement.

For its part, the MEA replaced the IPW program with the Support Programme for Application of Wind Energy in the Netherlands (*Toepassing Windenergie in Nederland*, or TWIN). The production goal of TWIN program remained the same as that of the IPW: 1000 Mw of wind energy operational by the year 2000, with an intermediate goal of 400 Mw installed by 1995. Two-thirds of program funds were devoted to technology and product development, while the remainder was to be used for subsidies that would stimulate the domestic wind power market.

In an effort to resolve some of the siting difficulties, the MEA, VROM, and seven coastal provinces also agreed to a siting plan for wind energy facilities.⁹⁴ However, this effort failed to solve the problems. Since the 200 municipal governments affected by the plan were not involved in its development, they made little effort to incorporate it into their zoning systems.⁹⁵ The ensuing difficulties were such that the Windplan was dissolved in 1993 with only small part of fund spent and few wind turbines installed.

Recognizing the difficulties that were being encountered in siting unpopular facilities such as waste facilities, manure processing facilities, and wind farms, Parliament passed in 1993 the “Nimby” Act. This law gave national and provincial governments the authority to require municipalities to specify in their zoning plans locations for unpopular facilities. However, it was heavily criticized its hierarchical, top-down approach, and resistance to it was such that it was never enforced.⁹⁶ In June 1995, Economic Affairs Minister Hans Wijers admitted that the target of producing 1,000 Mw of electricity through wind turbines by 2000 would not be met. Only 150 Mw of electricity was being by wind turbines at that point, and additional facilities were being constructed at a rate of only 30 Mw per year.⁹⁷

The publication by the MEA in December 1995 of the Third White Paper on Energy marked a new phase in Dutch renewable energy policy. This paper stated that 10 percent of energy consumption, amounting to 17 percent of total electricity output, should come from renewable sources by 2020, and that wind energy was to contribute 45 percent of this primary energy.⁹⁸

energy planning. In 1989, however, the Electricity Act was enacted that separated electricity production and distribution. The law also allowed energy distribution companies to generate up to 25 Mw of energy (Slingerland, S. 1997. Energy conservation and organization of electricity supply in the Netherlands. *Energy Policy* 25, 2: 193-203).

⁹³ Vidal, John. Week at the knes - Eco Diary. *Guardian*, Feb. 8, 1991.

⁹⁴ Administrative agreement of government and provinces on the issue of siting wind energy facilities, Ministry of VROM, the Hague, July 1991.

⁹⁵ Although the Dutch provinces have the authority to design regional plans, these plans only designate general areas suitable for certain types of development (Wolsink. 1996. Dutch wind power policy: Stagnating implementation of renewables).

⁹⁶ Wolsink, Maarten. 2003. Reshaping the Dutch planning system: a learning process? *Environment and Planning A* 35, 4: 705-723.

⁹⁷ Netherlands' wind power target will not be met. *Power Europe*, July 28, 1995. pg. 16.

⁹⁸ van Rooijen and van Wees. 2003. *Green electricity policy in the Netherlands*.

However, these goals were to be achieved primarily through the use of market mechanisms rather than through direct subsidies. The 1996 regulatory energy tax (see Section 9.3.2) was intended to stimulate demand for green electricity through exemptions for renewable energy generators, importers, and consumers. The revenues from the tax were then used to subsidize renewable energy producers. Although the tax was successful in stimulating a demand for renewable energy, the siting issues remained unresolved. Only 52 Mw wind power was installed in 1996, as distributors turned to importing more renewable energy rather than seeking domestic sources.⁹⁹

In 1997, the MEA acknowledged once again that its efforts to promote the production of wind energy had failed. It placed the blame on a number of implementation problems, including overlapping claims on land; insufficient capacity at the local level to deal with these overlapping claims; appeals by opposing residents and environmental organizations, resulting in delays and cancellations; and poor cooperation among various government departments. It then introduced new Renewable Energy Program that included tax incentives for renewables (contingent on EU approval) increased R&D budgets, increased efforts to resolve siting problems, and a new renewable energy target for energy distribution companies for the year 2000.¹⁰⁰ As of 1998, however, the total amount of wind power installed in the Netherlands remained only 396 Mw.¹⁰¹

⁹⁹ Junginger, Agterbosch, Faaij, and Turkenburg. 2004. Renewable electricity in the Netherlands.

¹⁰⁰ Climate Action Network. 1997. *Independent NGO Evaluations of National Plans for Climate Mitigation - OECD Countries: Fifth Review, October 1997*.

¹⁰¹ Junginger, Agterbosch, Faaij, and Turkenburg. 2004. Renewable electricity in the Netherlands.

CHAPTER 10 - CLIMATE POLICY DEVELOPMENT AND IMPLEMENTATION IN JAPAN

10.1 INTRODUCTION

In Japan, national policy regarding climate change is determined within a Japanese Climate Policy Subsystem. As in the other subsystems, the policy process in this subsystem between 1988 and 1997 occurred in three major phases. The first, from 1988 to mid-1990, resulted in the Action Program to Arrest Global Warming. The second, from mid-1990 to mid-1999, resulted in the development of a new Basic Law on the Environment. The final phase, which transpired from mid-1993 to COP 3 in December 1997, ended with the acceptance of a ghg emissions reduction target of 6 percent from 1990 levels by 2012.

Like the United States and the Netherlands, Japan has been unable to meet the emissions reductions target it adopted in the early 1990's. Although Japan adopted the target of stabilizing per capita CO₂ emissions at 1990 levels between 2000 and 2010 in its 1990 Action Program to Arrest Global Warming, emissions rose throughout the decade. Per capita CO₂ emissions had increased by 6.7 percent by 1995, and total CO₂ emissions had increased by 8.3 percent.¹ By 2000, per capita emissions had increased by 9.4 percent, while total CO₂ emissions had increased by more than 12 percent.²

Much of this rise in emissions can be attributed to a failure to implement measures contained in the initial Action Plan.³ In particular, MITI encountered tremendous difficulties in building the nuclear power plants that were expected to contribute much of the expected reductions.⁴ As with the case of wind energy in the Netherlands, the formulation of Japan's national nuclear energy policy took place within a national energy policy subsystem. However, policies regarding specific sites on which the facilities were to be built were determined within a number of prefecture-level nuclear energy policy subsystems. The remainder of this chapter describes the dynamics that occurred within and among these overlapping subsystems: the Japanese national climate policy subsystem, the Japanese national nuclear energy policy subsystem, and several prefecture nuclear energy policy subsystems. Figure 10.1 depicts these overlapping subsystems.

¹ Climate Action Network. 1997. *Independent NGO Evaluations of National Plans for Climate Mitigation - OECD Countries: Fifth Review, October 1997*.

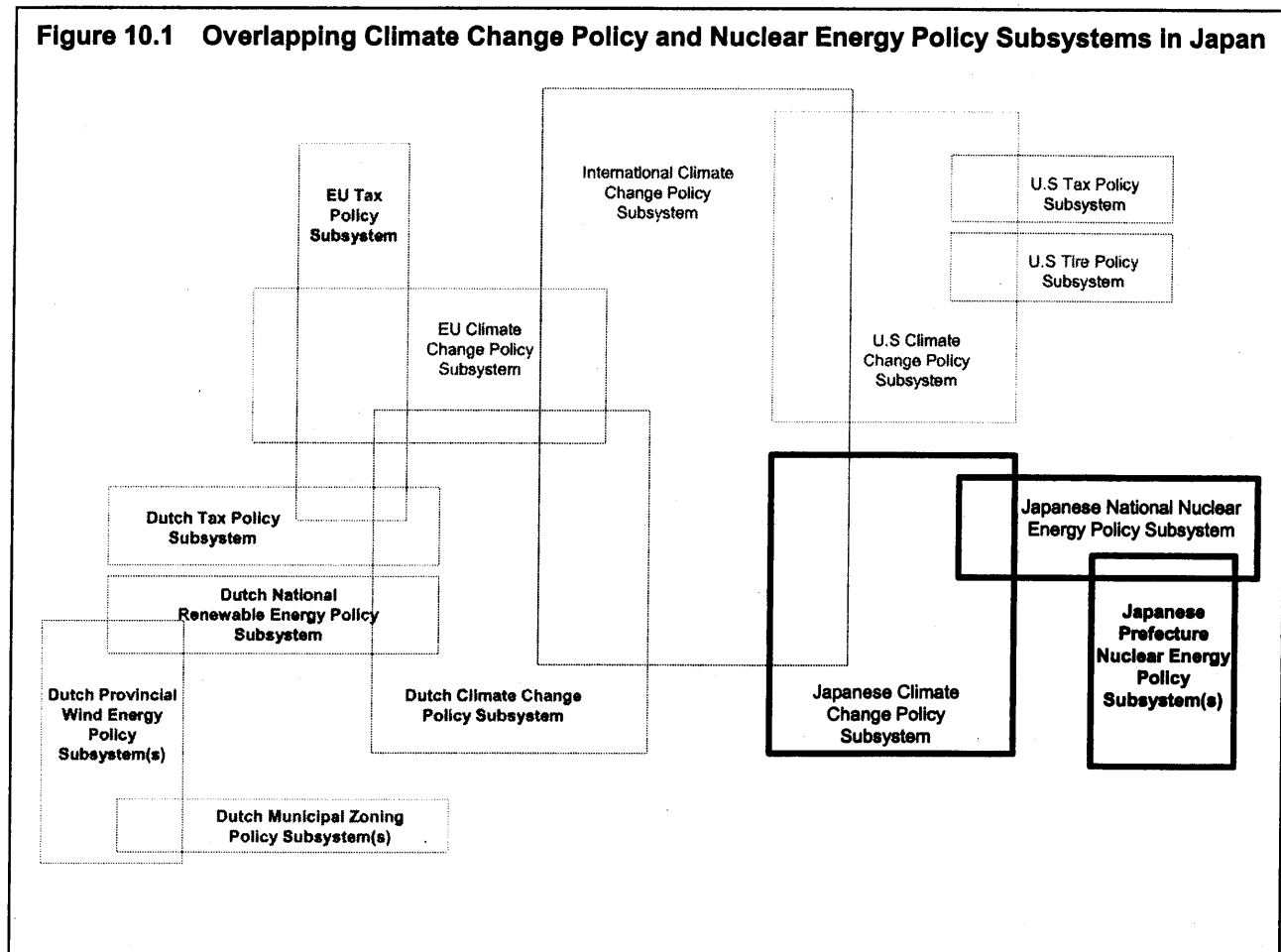
² World Resources Institute. 2004. Climate Analysis Indicators Tool.

³ It should be noted here that, like in the United States and the Netherlands, some of the failure to meet this target can be attributed to inaccurate forecasts of economic growth. (Climate Action Network. 1997. *Independent NGO Evaluations of National Plans for Climate Mitigation - OECD Countries: Fifth Review, October 1997*).

⁴ Other examples of implementation failures included lax enforcement by the Ministry of International Trade and Industry (MITI) of existing laws intended to reduce industrial energy consumption and stalled efforts to improve public transportation caused by a lack of coordination among key government ministries (Climate Action Network. 1997. *Independent NGO Evaluations of National Plans for Climate Mitigation - OECD Countries: Fifth Review, October 1997*; Interview #57. Keidanren, Japan. Feb., 1998).

10.2 THE JAPANESE CLIMATE POLICY SUBSYSTEM

As in international climate policy subsystem and the other national climate policy subsystems, the three phases of the Japanese climate policy subsystem were driven by two competing coalitions: an Economic Growth Coalition and a Precautionary Coalition. These coalitions held similar beliefs and had many of the same members as their counterparts in the international climate policy subsystem. Although Economic Growth Coalition was able to dominate all three phases, the subsystem dynamics were such that the Precautionary Coalition was able to extract significant compromises in terms of the policy outcomes of each phase.



10.2.1. Phase I: 1988-1990

Prior to 1989, most of Japan's involvement with global environmental issues such as climate change was left largely to the Japan's Environment Agency, which formed the core of the Precautionary Coalition at the time.⁵ During the early 1980's, Environment Agency Director-

⁵ For a more detailed discussion of environmental politics in Japan, see, e.g., Broadbent. 1998. *Environmental Politics in Japan, Networks of Power and Protest*; Gibbs, David and James Longhurst. 1995. Sustainable development and environmental technology: A comparison of policy in Japan and the European Union.

General Kujiroaka convinced Prime Minister Zinko Suzuki to establish an Ad Hoc Committee of Global Environmental Problems. The committee's report, which urged greater international attention to the problems of deforestation, desertification, global warming, biodiversity loss, and other global environmental issues, prompted Bunbei Hara, Kujiraka's successor, to propose at the 10th anniversary of the 1972 Stockholm Convention that a World Commission on Environment and Development (WCED, also known as the Brundtland Commission). This commission issued in 1987 the report "Our Common Future," which in turn led to the 1992 UN Conference on Environment and Development (UNCED).⁶

In response to the WCED report, the Environment Agency started in the late 1980s to pay more attention to global environmental issues. In 1988, it established the Research Group on Global Warming, and created a Global Environmental Protection Office the following year.⁷ At the same time, Japanese policymakers and politicians were searching for means for improving Japan's image internationally. Stung by severe international criticism for its reluctance to sign the Vienna Convention and limited by Article Nine of its constitution to non-military types of international contributions, Japanese government turned to official development assistance (ODA) and the environment as a means to become an international leader.⁸

As international climate change politics began to gain momentum, Prime Minister Sosuke Uno established an Interministerial Council on Global Environmental Protection in July of 1989 to coordinate the government's policies regarding international environmental issues. Leadership of the Council was given to the Environment Agency and the director-general of the Environment Agency named global environment minister.

It was at this point that the various actors and organizations began to coalesce into the precautionary and economic growth coalitions. MITI and MFA had traditionally been the most powerful ministries in the Japanese government, which had been dominated throughout most of its post-war history by the conservative, pro-business Liberal Democratic Party (LDP). Both MITI and the Ministry of Foreign Affairs (MFA) had sought to lead the Interministerial Council. However, the Environment Agency and others in the precautionary coalition were bolstered by the support of Prime Minister Noboru Takeshita. As Prime Minister, he saw global environmental issues as a means for strengthening Japan's stature internationally.⁹ When fallout from a political scandal forced him to resign in June 1989, he made the environment his "special issue area." Returning to the Diet, he became chairman of the Diet Environment Alliance (*zoku*).

Environmentalist 15, 3: 197; Kawashima, S. 1995. A Survey of Environmental Law and Policy in Japan. *North Carolina Journal of International Law and Commercial Regulation* 20, 2: 231; Schreurs. 2002. *Environmental Politics in Japan, Germany, and the United States*; Schreurs. 2003. Divergent paths: Environmental policy in Germany, the United States, and Japan; and Taylor, J. 1999. Japan's global environmentalism: rhetoric and reality. *Political Geography* 18, 5: 535-562;

⁶ See chapter 7.

⁷ Schreurs. 2002. *Environmental Politics in Japan, Germany, and the United States*.

⁸ Reimann, Kim D and Forrest, Richard 2002 Connecting Global and Local Societal Activism: International Politics, NGOs and the Environmental Movement of Japan; Schreurs. 2002. *Environmental Politics in Japan, Germany, and the United States*.

⁹ Interview #56. Globe Japan, Japan. Jan., 1998; Interview #23. Environment Agency, Japan. Jan., 1998; Schreurs. 2002. *Environmental Politics in Japan, Germany, and the United States*. The LDP controlled Japan's government for most of the post-war years, and remains Japan's most powerful political party..

With his influence, the environment became a popular cause among politicians allied with the Keiseikai, the dominant faction within the LDP that he controlled.¹⁰ Global environmental issues also began to gain substantial public support and as greater attention from the press.¹¹ As was discussed in Chapter 6, however, few domestic NGOs were engaged in the issue at the time.¹²

Soon after it was established, the Interministerial Council on Global Environmental Protection began to formulate its Action Plan to Arrest Global Warming. Sharp differences emerged at this point between MITI and the Environment Agency. The Environment Agency supported the idea of a legally-binding international target as called for by the EC at the Noordwijk conference in the fall of 1989. MITI officials were more concerned about the economic implications of “premature action.”¹³ However, they were also influenced by Prime Minister Takeshita’s concern about the issue, their own concerns for energy diversification, and the opportunity that the issue presented to showcase Japan’s successes in improving energy efficiency and reducing pollution.¹⁴ Rather than to advocate inaction, MITI supported a plan that promoted energy efficiency and the development of new technologies.

In an effort to take control of the climate change issue away from the Environment Agency, MITI first unveiled its plan, entitled New Earth 21: An Action Program for the 21st Century, at the White House Conference on Science and Economic Research Related to Global Change in April of 1990. The plan called for international cooperation in establishing a 100-year program to clean up the global environment through the accelerated introduction of clean energy. This effort would include the construction of safer nuclear power plants, the introduction of new and renewable energy sources, and the development of environment friendly technologies and production processes.¹⁵ The Interministerial Council had not yet approved the plan, however, and it was received with skepticism by the international community. It was not until July 1990 at the Houston Summit that it gained the support of U.S. EPA Administrator Bill Reilly, at which point the Interministerial Council also gave its approval.

While MITI was pursuing approval of New Earth 21, the Environment Agency continued with its efforts to win support for the EU proposal of a CO₂ stabilization target. Using analyses prepared by its Energy Agency, MITI had argued that at best, CO₂ emissions could be kept to a 16 percent increase over 1990 levels by 2000. The Environment Agency responded with its own analyses suggesting that stabilization could be achieved with the implementation of various energy efficiency measures, fuel switching, and co-generation. It eventually gained the support of several other ministries, including the Ministry of Foreign Affairs, the Ministry of Transportation, and the Ministry of Agriculture, Forests, and Fisheries. More importantly, it won

¹⁰ For example, when the Diet formed an Investigating Committee on Basic Environmental Problems, it named a powerful former finance minister as its chair, and a number of influential LDP politicians became members (Schreurs. 2002. *Environmental Politics in Japan, Germany, and the United States*).

¹¹ The number of news articles on climate change in the Japanese press increased from 6 in 1989 to 98 in 1990 and 328 in 1991. In a March 1990 survey of public opinion on the environment, global environmental issues were ranked as being of greatest concern (Schreurs. 2002. *Environmental Politics in Japan, Germany, and the United States*).

¹² Interview #3. World Resources Institute, Japan. Nov., 1998. See Section 6.1.2.

¹³ MITI Official warns CO₂ reduction may cut GNP. *Japan Economic Newswire*.

¹⁴ Schreurs. 2002. *Environmental Politics in Japan, Germany, and the United States*.

¹⁵ MITI, New Earth 21: Action Program for the 21st Century. 1990.

the support of the LDP, which was anxious to be able to announce a CO₂ reduction target prior to the Second World Climate Conference.¹⁶

With this support, the Environment Agency was able to force MITI to back down from its refusal to accept any sort of stabilization target. Using a very complex set of analyses, MITI suggested that total CO₂ emissions could be reduced after 2013, and that stabilization could be achieved on a per capita basis by 2000.¹⁷ The Environment Agency, however, continued to insist on an unqualified stabilization target. With neither group willing to compromise any further, the Interministerial Council agreed on October 23, 1990, that Japan's Action Plan to Arrest Global Warming would consist of two parts. The first was MITI's revised plan calling for stabilization of per capita CO₂ emissions at 1990 levels by 2000. However, if technological developments in new energy and CO₂ sequestration occurred faster than expected, the Environment Agency's plan would be put effect. Although it was MITI's plan that was announced by Japan at the Second World Climate Conference, the Environment Agency won an important symbolic victory in that its plan was also incorporated into the package.¹⁸

10.2.2. Phase 2: 1990-1993

As negotiations for the FCCC got underway in early 1991, MITI and other members of the economic growth coalition began to exert greater control over Japan's climate policy process. Although Nobutoshi Akao of the MFA headed most of Japan's delegations to the INC, he worked closely with Katsuo Seiki of MITI.¹⁹ The Environment Agency, while well represented on all of the delegations, was generally given a more secondary role.²⁰ At the beginning of INC 2 in June of 1991, Seiki and Akao worked informally with Robert Reinstein, the head of the U.S. delegation, to develop the "Pledge and Review" proposal (see Chapter 7).²¹ Several days later, Akao formally introduced the proposal into the negotiations. Although a few European delegations viewed it as an initial step towards a compromise, it was severely criticized by the international NGO community.

The proposal was also attacked in Japan by both the LDP and the Environment Agency, in part because MITI and the MFA had failed to obtain their approval prior to introducing the initiative. The LDP's Special Committee on Global Environmental Problems criticized the ministries for "going it alone," and refused to give its approval to the proposal without substantial modification. The Committee went on to insist that, at a minimum, the plan should incorporate the EC's stabilization 2000 stabilization target. Shortly afterwards, Environment

¹⁶ Interview #29. University of Tokyo, Japan. Jan., 1998; Interview #25. Ministry of International Trade and Industry, Japan. Jan., 1998.

¹⁷ In making this proposal, MITI assumed that while CO₂ emissions were expected to increase 6 percent by 2000, Japan's population would also increase by approximately 6 percent. Emissions would be stabilized, therefore, if they were measured on a per capita basis.

¹⁸ Schreurs. 2002. *Environmental Politics in Japan, Germany, and the United States*.

¹⁹ Interview #25. Ministry of International Trade and Industry, Japan. Jan., 1998.

²⁰ Interview #32. Asahi Shimbun, Japan. Jan., 1998.

²¹ Interview #25. Ministry of International Trade and Industry, Japan. Jan., 1998; Interview #7. Department of State, United States. Jan., 1989.

Agency Director-General Achi announced to Washington that Japan intended to agree to a firm target.²²

At this same time, members of the Precautionary Coalition began to push for the establishment of a new basic law on the environment. The Diet had already begun considering revising Japan's Basic Law for Environmental Pollution Control, which had been established in the early 1970s following the Stockholm Conference. At Takeshita's urging, the LDP established in February 1992 an Investigatory Committee on Basic Environmental Problems. Several months later, Prime Minister Kiichi Miyazawa announced that he had ordered government agencies to begin working on creating a new Basic Environment Law.

With the strong support of former Prime Minister Takeshita, the Environment Agency joined forces with the Ministry of Finance to promote consideration of carbon taxes and the elevation of the Environment Agency to ministerial status as part of the revisions of the Basic Law.²³ Takeshita hosted an international eminent persons meeting in April 1992 to promote international discussion of carbon taxes, and the Environment Agency released a report the following month that argued that such a tax could ensure that Japan would stabilize its CO₂ emissions at 1990 levels by 2000.²⁴

The tax proposal sparked strong opposition by MITI and industry groups, and served to reinvigorate the economic growth coalition. In particular, the *Keidanren*, the Japanese Federation of Economic Organizations, became much more active in the debate.²⁵ Although it generally accepted the need for Japan to take additional measures to reduce emissions, it argued that the consumption tax should be raised, as this would be distributed more widely. Many with the LDP also opposed the idea for fear that it would cost the party public support.²⁶

In May 1992, the Environment Agency established a team to work out the framework for the new law. The Agency issued its proposal for a Basic Law on the Environment, including the idea of a carbon tax, in January 1993. Two months later, however, it fell victim to the *Sagawa Kyubin* scandal in which Takeshita's mentor, Shin Kanemaru, was accused of accepting bribes. The scandal caused Takeshita's *Keiseikai* faction of the LDP to collapse and Takeshita himself to lose tremendous political influence. More importantly, Takeshita and other supporters of the carbon tax became too preoccupied to pay much attention to the Basic Law as it worked its way through the Diet. This provided MITI, *Keidanren* and other opponents of a carbon tax with an opportunity to put their own version of the law into place. As a result, the House of Representatives environment committee passed on May 18, 1993, a compromise version of new Basic Environmental Law containing only a reference that the government would seek public understanding and cooperation in introducing economic sanctions as a way of preserving the environment.²⁷ The environment committee of the House of Councilors did the same on June 14,

²² Schreurs. 2002. *Environmental Politics in Japan, Germany, and the United States*.

²³ The Ministry of Finance viewed the tax as a means to help pay for the large increases in environmental expenditures that the government had incurred since the late 1980s (Schreurs. 2002. *Environmental Politics in Japan, Germany, and the United States*).

²⁴ Environment Agency of Japan, *An Appraisal of Instruments to Prevent Global Warming*. May 1992.

²⁵ Interview #35. *Yomiuri Shimbun*, Japan. Jan., 1998.

²⁶ Schreurs. 2002. *Environmental Politics in Japan, Germany, and the United States*.

²⁷ Schreurs. 2002. *Environmental Politics in Japan, Germany, and the United States*.

1993. With these approvals, the bill's passage into law was virtually assured. On June 18, 1993, only days before a vote was to be taken, the Diet was dissolved as a result of fallout from the *Sagawa Kyubin* scandal and the LDP lost its 38-year hold on power. It was not until November 1993 that a similar bill was passed under the Hosokawa administration.

10.2.3. Phase 3: 1993-1997

With the passage of the new Basic Environmental Law, attention returned once again to the international policy process. During the lull in the negotiations between July 1992 when the FCCC was opened for signature and its entry into force in March 1994, both the precautionary coalition and economic growth coalition experience substantial turnover in membership. MITI was hit particularly hard by the loss of experience and knowledge caused by this turnover; MITI officials on the Japanese delegations to the INC meetings leading up to COP 1 participated in an average of fewer than one previous meeting. Although the Environment Agency experienced a similar turnover, the MFA did not²⁸ This was due in part by the continued involvement of Nobutoshi Akao, the MFA's senior negotiator.

As preparations for COP 1 ensued, representatives of the Environment Agency and the MFA joined forces once again in to propose that Japan host COP 3 in Kyoto. The MFA saw the offer as a means for Japan to show additional leadership on international environmental issues. The Director General of the Environment Agency, Sohei Miyashita, wanted Japan to host the meeting in order to strengthen its own hand domestically, anticipating that, as host, Japan would face substantial international and domestic pressure to take more aggressive action to reduce its emissions.²⁹ Although MITI did not favor the proposal, the MITI officials most directly involved in the negotiations were relatively new in their positions, and failed to recognize the leadership expectations that would be put place on Japan as the host country. *Keidanren* and other members of the economic growth coalition also failed to notice the proposal. It was not until after the offer was accepted at COP 2 that they became aware of the proposal and begin to understand its domestic ramifications.³⁰

After COP 2, Japan began to receive pressure to develop its own proposal for a protocol. The MFA, MITI, the Environment Agency, and the Ministry of Transportation (MOT) began interministerial negotiations on a proposal in August 1996. Immediately, however, there were substantial differences among them, particularly with regards to an emissions reduction target. The Environment Agency wanted to propose that Parties take on differentiated targets, but only if they agreed to start reducing emissions in 2000. If they could not agree to do so, the Agency supported the imposition of the same target for all countries. MITI and MOT both supported

²⁸ As discussed in Chapter 6, most mid- and upper-level officials in Japanese agencies are expected to change positions every two years or so in order to advance their careers. An analysis of INC/COP meeting participation rates showed that the average participation rate for MITI delegates fell from 3 meetings during the 1990-1992 period to 1.7 meetings during the 1992-1995 period. The participation rate for Environment Agency delegates fell from 4.1 meeting in the 1990-1992 period to 2 meetings during the 1992-1994 period. However, the MFA participation rate increased from 2.7 meetings during the 1990-1992 period to 5.1 meetings during the 1992-1995 period. The participation rate is defined here as the average number of previous INC/COP meetings in which a given delegate to a meeting taking place during that period had participated.

²⁹ Interview #59. Environment Agency, Japan. Jan., 1998.

³⁰ Interview #57. Keidanren, Japan. Feb., 1998; Interview #32. Asahi Shimbun, Japan. Jan., 1998.

differentiated targets, but argued that further reductions domestically were impossible and that Japan should not put forward any proposal. MFA believed that Japan could not present a proposal that did not work towards a reduction in emissions, but also believed that it should not present a proposal that it could not meet. MFA also supported differentiated targets, fearing that the United States would not participate in a protocol containing a universal target.

After two months of negotiations failed to resolve the differences among the ministries, the MFA drafted a proposal that reflected what it hoped would be a viable compromise. As introduced at AGBM 5 in December 1996, the proposal called for each industrialized party to select one of two targets:

- a. To maintain its anthropogenic emissions of CO₂ over the period from [2000+x] to [2000+x+(5)] at an average yearly level not more than p tons of carbon per capita, or
- b. To reduce its anthropogenic emissions of CO₂ over the period from [2000+x] to [2000+x+(5)] at an average yearly level of not less than q per cent below the level of the year 1990.³¹

The proposal was not well received by environmental groups or the international community, however, as the x , p , and q values were left unspecified.

With negotiations in the AGBM at a virtual impasse, international pressure grew over the course of the following months for Japan, as the host of COP 3, to take a greater leadership role. MITI, MFA and the Environment Agency remained unable to resolve their differences well into 1997, however. The Environment Agency wanted Japan to propose at a 7 percent reduction in CO₂ emissions by 2010, arguing that analyses by the National Institute for Environmental Studies demonstrated that a reduction of CO₂ emissions of as much as 7.6 percent below 1990 levels by 2010 was feasible. The MFA argued that a minimum of a 5 percent reduction by 2010 would be necessary to meet an “internationally acceptable” rate of reduction. MITI did not want to see anything more than a stabilization target for 2010, and did not want Japan to make any proposal until the United States had made its position clear.

This stalemate continued until July 1997, at which point Prime Minister Hashimoto was forced to intervene. Hashimoto had taken a personal interest in ensuring the success of the Kyoto meeting, and instructed his Cabinet Secretariat to facilitate a compromise. Hashimoto went on to order MITI, MFA, and the Environment Agency to work with the Secretariat in developing a domestic policy in time for the final AGBM meeting in the fall.

As discussions with the Cabinet Secretariat ensued, MITI flatly rejected the 7 percent reduction target proposed by the Environment Agency. Recognizing that Japan’s role as host required that its proposal be internationally acceptable, the Secretariat proposed that MFA’s 5-percent reduction target be used as the basis for further discussions. With MITI continuing to insist that Japan could not meet any target beyond stabilization, the Secretariat focused on finding ways to incorporate flexibility into the proposal. A formula for differentiated targets based on per capita emissions, emissions per unit of GDP, and expected population growth reduced Japan’s required emissions reductions from 5 percent to 2.5 percent below 1990 levels. Expanding the target from CO₂ to a basket of three gases (CO₂, CH₄, and N₂O) gained an additional .5 percent. To bridge the remaining 2-percent gap, the MITI and the Secretariat

³¹ Government of Japan. Proposals on the Elements to be Included in the Draft Protocol to the United Nations Framework Convention on Climate Change. December 1996.

proposed that a 2-percent “noncompliance buffer” be established to protect those Parties making good-faith efforts to reduce their emissions fall short of their target.³²

On October 6, 1997, Chief Cabinet Secretary Kaneko Muraoka announced the compromise proposal. All industrialized countries would be required to reduce their emissions of CO₂, CH₄, and N₂O collectively by 5 percent below 1990 levels for the period of 2008-2012. This target would be adjusted, however, to take into each country’s national circumstances. A differentiation formula based on each country’s per capita emissions, emissions per unit of GDP, and expected population growth would be used to revise upwards each country’s 5 percent target by up to 5 percentage points. This would mean would only be required to stabilize their emissions at 1990 levels.

After the United States proposed in October 1997 that industrialized countries return their emissions of six gases to 1990 levels by 2012, Japan found itself positioned between the United States and the EU when COP 3 began in December 1997. Although not entirely comfortable with Japan’s 2.5 percent reduction requirement, MITI, Keidanren, and other members of Japan’s economic growth coalition had been assured by their counterparts in the United States that the Clinton Administration would be unable to go beyond their stabilization target.³³ Thus they were caught completely by surprise when Vice President Gore and Stuart Eizenstat, the U.S. lead negotiator, announced that the United States was willing to reduce emissions by 7 percent below 1990 levels by 2012. This shift put Japan, as the host country, in the uncomfortable position of appearing to be a laggard at a meeting on which it had staked its reputation as an environmental leader.

During the final hours of the negotiations, the United States agreed to back off from its demand for meaningful participation by developing countries, while the EU agreed to accept differentiated targets and an emissions trading system. However, both the United States and the EU insisted that the differentiation in targets among the United States, the EU, and Japan be no more than 2 percentage points in order to minimize any effects on competitiveness. This meant that Japan would need to accept an emissions reduction target of 6 percent below 1990 levels.

This raised immediate problems for MITI, as the 2-percent non-compliance buffer had also been rejected. Furthermore, the agreement to include the three fluorocarbons in the basket of gases reduced Japan’s potential emissions reductions by 2 additional percentage points. The inclusion of removals by sinks increased potential reductions by only .3 percent, meaning that MITI had to account for an additional 5.2 percent of emissions reductions in order to accept the agreement. Faced with the imminent collapse of the negotiations, MITI agreed that the loss of buffer could be accommodated through undefined research and technology development efforts. At the urging of Prime Minister Hashimoto, it agreed that the remaining reductions could be achieved, at least in theory, through afforestation, emissions trading, and joint implementation. With the crisis resolved, Prime Minister Hashimoto announced in a phone conversation with Vice President Gore that Japan would accept the –6 percent target.

³² Kawashima, Yasuko. 2000. Japan's Decision-Making about Climate Change Problems: Comparative Study of Decisions in 1990 and 1997. *Environmental Economics and Policy Studies* 3 (2000): 29-57.

³³ Interview #30. Keidanren, Japan. Feb., 1998; Interview #24. Ministry of International Trade and Industry, Japan. Jan., 1998.

10.3 OVERLAPPING SUBSYSTEMS

The Japan's National Report submitted to the INC Secretariat in 1993 was based on the Action Plan to Arrest Global Warming. As in the other countries, it described a wide range of measures intended to reduce per capita CO₂ emissions to 1990 levels by 2000. However, it expected to achieve much of the necessary reduction through a sharp increase in nuclear generating capacity. MITI's 1990 New Earth 21 program called for the doubling of the amount of energy generated by nuclear power by 2010, which would require the construction of 40 new power plants.³⁴ This goal was implicit in its first national communication, and made explicit once again in MITI's 1994 Long-Term Energy Supply and Demand Outlook, which called for an increase in Japan's total nuclear generating capacity from 41 gigawatts (GW) in 1995 to 70 gigawatts in 2010.³⁵ Implementing this plan, however, has been difficult, due in part to the resistance of local communities in which the new plants were to be sited. As of 2001, nuclear energy had increased to only 42 GW, far short of the goal anticipated 8 years earlier.³⁶ This section describes the dynamics that occurred within the national nuclear energy subsystem in which this goal was formulated and the prefecture-level subsystems in which decisions regarding the siting of particular plants was determined.

10.3.1. The Japanese National Nuclear Energy Subsystem

National nuclear energy policy in Japan is set by three key agencies. The central nuclear policy making body is the Japan Atomic Energy Commission (JAEC), which establishes the Japan's nuclear energy program through its Long-Term Program (LTP). These Long-Term Program documents were released every 5-7 years, and were intended to guide the development of the nuclear energy program during that period. Through the 1990's, the JAEC was supported in this effort by the Science and Technology Agency (STA) and MITI.³⁷ The STA was responsible for supporting the JAEC through research and analyses. MITI was responsible for preparing periodically a Long-Term Outlook on Energy and working with industry to facilitate the implementation of the LTP.

Responsibility for implementing the program fell primarily to MITI and a coalition of private corporations and public-private entities or "special status" corporations. The industries involved in the implementation process included the nine regional utilities (e.g., Tokyo Electric Power Corporation (TEPCO)) and a number of major manufacturers (e.g., Mitsubishi Heavy Industries, Toshiba, Hitachi, and Fuji). The major special-status corporations included Power Reactor and Nuclear Fuel Development Corporation (PNC), the Japan Atomic Power Company, and the Electric Power Development Corporation.³⁸

³⁴ Report calls for doubling nuclear power share by 2010. *Japan Economic Newswire*.

³⁵ UNFCCC. Report on the in-depth review of the national communication of Japan. June 1996.

³⁶ Pickett, S. E. 2002. Japan's nuclear energy policy: from firm commitment to difficult dilemma addressing growing stocks of plutonium, program delays, domestic opposition and international pressure. *Energy Policy* 30, 15: 1337-1355.

³⁷ The STA was abolished in 2001, with its responsibilities given to the Ministry of Culture, Sports, Science and Technology (MEXTI). and MITI, which is now the Ministry of Economics, Trade and Industry (METI).

³⁸ The MFA and the Ministry of Finance (MOF). also played a role in the policy process. The MFA was responsible for negotiating the crucial agreements with the United States, which was the only supplier of the fuel used by

Until 1996, Japan's national nuclear energy policy was developed through a very closed, tightly controlled decision-making process.³⁹ Although JAEC, MITI, and STA often had differing organizational objectives, the officials involved in the program shared a common set of policy core beliefs regarding Japan's nuclear energy, and worked hard to ensure that their industrial and research strategies coincided. In addition, MITI worked closely with the utilities in developing its commercialization plan, and relied heavily on a council of experts selected from the inner circles of the nuclear industry and government. These experts all held the same fundamental view that nuclear energy should be promoted and was necessary to establish Japan's long-term energy security. This coordination was also facilitated by the frequent rotation of personnel among the different agencies and industry engaged in the process.⁴⁰ Finally, the LDP played an important role in ensuring cooperation among utilities, government agencies, and local officials.⁴¹

When the JAEC was established in 1956, it immediately set to work in developing Japan's nuclear energy program. The first successful nuclear power plant, the Japan Power Demonstration Reactor (JPDR) went into operation in 1963, and the first commercial nuclear power plant went into operation in 1966. By 1990, 38 nuclear power plants were in operation, and another 15 were under construction.⁴²

After the 1986 Chernobyl accident, however, public concern about the safety of nuclear power began to increase sharply. In February 1988, 3000 people turned out to demonstrate against a plan to start up a nuclear power plant in Ikata on Shikoku Island, a marked change from the relatively small cadre of environmentalists and local residents that had been engaged in previous protests. In April of that year, on the second anniversary of the Chernobyl accident, more than 20,000 people attended an antinuclear demonstration in Tokyo organized by about 150 local groups.⁴³ To counter these protests, the agencies and corporations directing the nuclear energy program launched a substantial public relations campaign to promote nuclear energy.⁴⁴

Japan's Fast Breeder Reactors (FBRs). The MOF was involved in decisions regarding the funding of new projects as well as subsidies and other incentives provided to local communities.

³⁹ During the early days of the program, decisions were often achieved through an implicit process known as *nemawashi*, which translates literally to "working around the root of the tree." *Nemawashi* refers to the subtle negotiations and discussions that occur between key players prior to official meetings (Pickett. 2002. Japan's nuclear energy policy: from firm commitment to difficult dilemma addressing growing stocks of plutonium, program delays, domestic opposition and international pressure).

⁴⁰ Interview #38. Kyoto University, Japan. Feb., 1998; Interview #57. Keidanren, Japan. Feb., 1998; Pickett. 2002. Japan's nuclear energy policy: from firm commitment to difficult dilemma addressing growing stocks of plutonium, program delays, domestic opposition and international pressure.

⁴¹ Samuels, Richard J. 1987. *The Business of the Japanese State Energy Markets in Comparative and Historical Perspective*. Ithaca: Cornell University Press.

⁴² . Report calls for doubling nuclear power share by 2010.

⁴³ Dauvergne, P. 1993. Nuclear-Power Development in Japan - Outside Forces and the Politics of Reciprocal Consent. *Asian Survey* 33, 6: 576-591.

⁴⁴The STA's 1989 public relations budget for nuclear power was 10 times larger than that of 1988, while MITI's public relations budget was almost 5 times larger in 1989 than it was the previous year (Ishida, Yukio. Japan Spends Billions of Yen to Promote Nuclear Energy. *Asahi Shimbun*, Oct. 9, 1989.). TEPCO increased its PR budget by 20 percent in 1989 (Dauvergne. 1993. Nuclear-Power Development in Japan - Outside Forces and the Politics of Reciprocal Consent). Throughout the 1990's, the annual budget for this PR campaign was more than

Despite these public relations efforts, public opposition to nuclear power continued to rise. A series of mishaps in several plants during the late 1980s and early 1990s added to this opposition. A poll in December 1990 indicated that while 65 percent of the public thought that nuclear power was necessary, 90 percent felt “uneasy” about it, 46 percent thought that it was unsafe, and less than half supported its further expansion.⁴⁵ A few years later, fewer than 22 percent of the population supported its continued aggressive growth.⁴⁶

This growing public opposition coupled with a series of lawsuits led to lengthy delays in the construction of new plants. By the mid-1990’s, the lead time for approval of nuclear plants had grown to 154 months, more than twice what was needed for a fossil-fuel powered plant.⁴⁷ The nuclear plants completed during the 1980’s had taken an average of 17 years and four months from the time of their proposal to the start of operations. As of 1991, however, the 14 plants scheduled to begin operating in the 1990s had taken an average of 25 years and seven months from the time of the proposal, assuming at that point that they would stay on schedule.⁴⁸

Despite these difficulties, MITI, STA, and the nuclear power industry continued to maintain ambitious goals for the expansion of nuclear power in Japan. In 1994, MITI issued its Long-Term Energy Supply and Demand Outlook, which called for an increase in Japan’s total nuclear generating capacity to over 70 gigawatts by 2010. This would entail the construction of over 20 new power plants.

In December 1995, however, an accident at the new Monju Fast Breeder Reactor reinvigorated the opposition. The following year, the residents of Maki, Niigata Prefecture, rejected a plan to build a nuclear power plant that the town authorities had once approved. This led the governors of Fukui, Niigata and Fukushima, three prefectures in which 60 percent of Japan’s nuclear power plants are located, to issue a letter to the Prime Minister calling for a national consensus before proceeding any further with nuclear power development.

Because the governor of a prefecture has the authority to veto plans for a new facility, the governors’ letter forced open what had previously been a very closed decision-making process.⁴⁹ The JAEC quickly began working to develop this “national consensus,” creating a number of informal Advisory Panels and holding a series of roundtable discussions and public symposiums on the decision-making process. The utilities and government agencies also began to make

¥10 billion annually (Yasuhiko, Yoshida. 2000. Nuclear Safety Issue Jars Japan to Reconsider Its Policy Program. *Japan Quarterly* 47, 1: 56).

⁴⁵ Suzuki, Tatsujiro. 1991. Japan's Nuclear Dilemma. *Technology Review* 94, October 1991: 47-48.

⁴⁶ Pickett. 2002. Japan's nuclear energy policy: from firm commitment to difficult dilemma addressing growing stocks of plutonium, program delays, domestic opposition and international pressure.

⁴⁷ Lesbirel, S. H. 1998. *NIMBY Politics in Japan: Energy Siting and the Management of Environmental Conflict*. Ithaca, NY: Cornell University Press.

⁴⁸ Dauvergne. 1993. Nuclear-Power Development in Japan - Outside Forces and the Politics of Reciprocal Consent.

⁴⁹ If the governor decides to veto a facility plan, the plan is for all practical purposes terminated, as a new law would need to be passed in the Diet in order to override a governor’s veto. Similarly, if the governor approves a plan, there is no official recourse that the community to take. A local community may call for a referendum to prevent the sale of land to a utility, which can stop the progress of a government or utility plan. These referendums are non-binding, however, and the outcome of siting negotiations can be altered by the election of a new mayor or city council (Dauvergne. 1993. Nuclear-Power Development in Japan - Outside Forces and the Politics of Reciprocal Consent).

greater efforts to explain their work and activities through community meetings and extended advertisements.

These changes in the decision-making process did lead to some adjustments in the government's nuclear energy policy as it was put forth in the 2000 LTP. Deadlines were made more flexible, and delays placed on various aspects of Japan's Fast Breeder Reactor program. It also called for more diverse options for research and development projects in order to provide greater flexibility in their implementation. The core aspect of the plan remained unchanged, however, in that it still called for the construction of 20 new nuclear power plants by 2010.⁵⁰

10.3.2. Japanese Prefecture Nuclear Energy Subsystems

The implementation of Japan's nuclear energy policy depended in large part on the coordination among MITI, the various utilities and corporations planning to build the facilities the local and prefecture officials responsible for approving the plans of the facilities. Although the plans themselves were developed by the utilities, MITI was responsible for approving the siting, design and operation of the plants. Local government officials, fishing cooperatives, and the governor of the prefecture in which the facility was to be sited were also part of the process. Although the governor of the prefecture has the authority to make the final decision, he was unlikely to do so without the consent of local officials. Much of this coordination was facilitated by the LDP, which generally controlled the government at all three levels.

During the early phases of Japan's nuclear energy program, cooperation among these many different players were ensured through a system of tacit commitments and promises. Many of the smaller towns were in need of jobs and infrastructure. The central government promised to provide these if the residents accepted the development of a nuclear power plant in their community. As a result, agreements with local communities were generally accompanied by governmental and private financial packages and incentives. This compensation system was made official in 1963 when MITI established the Compensation Standards for Electric Power Development, a set of guidelines meant to facilitate the siting of new power plants. The system was expanded further in 1974 with the passage of the Three Laws for Power Source Development, which provided a siting promotion subsidy and additional funding for infrastructure development.

In general, the siting process would transpire as follows. The utility would conduct various preliminary studies, select a site, and develop plans for the facility. Local hearings were then held in which local citizens often expressed opposition to the plans. Negotiations among the MITI, the utilities, local cooperatives and the town council would ensue in which a compensation package would be developed in exchange for approval by the town council. This compensation could be in the form of tax benefits, public works projects, schools, roads, and athletic centers. If other minor conflicts arose between the local community and the utility, they were resolved through negotiations with the relevant stakeholders supported by various compensation packages.⁵¹ The process was also facilitated by political maneuverings by the LDP at both the

⁵⁰ Pickett. 2002. Japan's nuclear energy policy: from firm commitment to difficult dilemma addressing growing stocks of plutonium, program delays, domestic opposition and international pressure.

⁵¹ Dauvergne. 1993. Nuclear-Power Development in Japan - Outside Forces and the Politics of Reciprocal Consent; Lesbirel. 1998. *NIMBY Politics in Japan: Energy Siting and the Management of Environmental Conflict*; Pickett.

local and national levels that ensured that the utilities had the upper hand in the bargaining process.⁵²

By the late 1980's however, this system had begun to unravel. With Japan's strong economic growth, income levels had risen to a point that offers of employment and infrastructure not longer satisfied the local communities. This forced the utilities and MITI to develop more elaborate and expensive compensation packages. In addition, the negotiations were made more difficult by the increased public opposition to nuclear power. Opponents began to use the courts and local ballot to halt the construction of plants.⁵³ This culminated in August 1996 when the residents of Maki, Niigata Prefecture, prevented the construction of a nuclear facility by the Tohoku Electric Power Company by voting against the sale of a crucial plot of land. This led the governor of Niigata, together with the governors of Fukui and Fukushima, to call for a halt in the construction of nuclear power facilities until a national concensus on the issue had been developed. At this point, the damage had already been done. The number of plans for new nuclear power plants decreased from 11 in the 1970s to 4 in the 1980s and none in the 1990s.⁵⁴ As of 2002, the most recent approval of a nuclear power plant occurred in December 1986, sixteen years earlier.

2002. Japan's nuclear energy policy: from firm commitment to difficult dilemma addressing growing stocks of plutonium, program delays, domestic opposition and international pressure.

⁵² Lesbirel. 1998. *NIMBY Politics in Japan: Energy Siting and the Management of Environmental Conflict*. For example, the central government would stack the hearings process in a way that facilitated power company efforts to divide local opposition. Out-of-town interests such as opposition party leaders or national environmental groups would be barred from the hearings altogether.

⁵³ In 1989, for example, antinuclear activists tried to halt the construction of the Tomari Nuclear Power Plant, and residents in Fukui filed suit in 1991 charging that the Takahama facility violated area residents' personal right to safety (Dauvergne. 1993. Nuclear-Power Development in Japan - Outside Forces and the Politics of Reciprocal Consent).

⁵⁴ Pickett. 2002. Japan's nuclear energy policy: from firm commitment to difficult dilemma addressing growing stocks of plutonium, program delays, domestic opposition and international pressure; Dauvergne. 1993. Nuclear-Power Development in Japan - Outside Forces and the Politics of Reciprocal Consent.

SECTION IV:
DISCUSSION AND
CONCLUSIONS

CHAPTER 11 – DISCUSSION

In chapter 5, I suggested five propositions that could be used to test the ACF perspective on treaty implementation outlined in the first two sections of this study. The first four propositions address the dynamics that transpire within and among subsystems. The fifth proposition, based on the discussion of power contained in Chapter 4, examines the relationship between coalition power and treaty implementation. This chapter discusses the application of these propositions to the experiences of the United States, Japan, and the Netherlands in implementing the Framework Convention on Climate Change.

11.1 PROPOSITIONS 1 AND 2: SUBSYSTEM DYNAMICS AND POLICY CHANGE

The first two propositions described in Chapter 5 pertain to the relationship between subsystem dynamics and treaty implementation.

11.1.1. Proposition 1: Policy Change and Dominant Coalitions

Proposition (1): The policy core attributes of a domestic government program are most likely to be significantly revised to implement an international agreement when (1) the coalition that instituted the initial domestic program does not remain in power within the national subsystem, and (2) the international and national policy subsystems are dominated by parallel coalitions.

This proposition contends that, if dominant coalition in a national policy subsystem is not the same one that dominates the international policy subsystem, then the policy core attributes of national government programs will be changed to implement the treaty as long as the coalition with an interest in maintaining the *status quo* remains the dominant coalition in the subsystem.

This proposition is demonstrated most clearly in the policy change that occurred within the U.S. climate policy subsystem following the 1992 elections. In this case, U.S. climate policy was changed to conform to changes that were being made in international climate policy. Despite many missteps, the economic growth coalition in the United States was firmly in control of the domestic policy process during the period immediately preceding the elections. It lost this control, however, when many of its members in the Bush administration were replaced by members of the precautionary coalition (most notably, the replacement of Dan Quayle by Al Gore). With this change, the precautionary coalition was in a position to reverse U.S. policy regarding targets and timetables and the negotiation of additional commitments for the post-2000 period. Thus condition (1) of the proposition is satisfied.

This example also satisfied condition (2) of the proposition. Many of the U.S. economic growth coalition members that were replaced after the 1992 elections were important sources of power for the international economic growth coalition. Their removal allowed the international precautionary coalition to assume greater control of the international policy process. Thus the U.S. and international climate policy subsystems were both controlled by precautionary coalitions. These two coalitions held a common set of policy core beliefs, cooperated extensively with each other, and indeed contained many of the same actors.

The validity of this proposition is also illustrated in the case of Japan. Prior to 1989, the economic growth coalition controlled the climate policy subsystem in Japan. In 1989, however, Prime Minister Takeshita's fall from grace and his ensuing decision to adopt the environment as his personal cause enabled the precautionary coalition to wrest away this control. As a result of Takeshita's concern for environmental issues and his creation of an environmental *zoku* within the LDP, Parliament forced MITI to drop its resistance to Japan's commitment to a firm emissions reduction target. A similar event occurred in 1995, when, as a result of system-wide personnel turnover, relatively inexperienced MITI officials failed to resist efforts by the Environment Agency and the MFA to have Japan host COP 3. The acceptance of this offer strengthened the Environment Agency's hand domestically, and also gave a tremendous boost to Japan's environmental NGO community.

11.1.2. Proposition 2: Policy Change and External Events

Proposition (2): If the international and national policy subsystems are not dominated by parallel coalitions, then significant perturbations external to the national subsystem (e.g., changes in socioeconomic conditions, public opinion, system-wide governing coalitions, or policy outputs from other subsystems) are a necessary, but not sufficient, cause of change in the policy core attributes of a national governmental program.

Building on Proposition 1, this proposition states argues that external changes are necessary to substantially alter the distribution of political resources among coalitions within the national subsystem. However, such perturbations are not, by themselves, sufficient to cause changes in national policy. The minority coalition must also be able to exploit the changed conditions such that it is able to achieve dominance and bring about the necessary policy changes.

The U.S. case provides an interesting example of this proposition as well. Prior to 1992, the U.S. and international climate policy subsystems were dominated by opposing coalitions: the precautionary coalition was in control of the internal subsystem, while the economic growth coalition controlled the U.S. subsystem. The 1992 elections, a system-wide event, allowed the precautionary coalition in the United States to take control of the U.S subsystem away from the economic growth coalition and enabled the international precautionary coalition to solidify its control of the international policy subsystem. In the United States, the election enabled the precautionary coalition to replace key decisionmakers who were members of the economic growth coalition with some of its own members and reverse some of the decisions made by the previous administration. These reversals include the switch from a rejection of the stabilization goal to a commitment that the United States should stabilize its emissions at 1990 levels in 2000 and from a rejection of legally binding targets and timetables in the FCCC to their acceptance in the Kyoto Protocol. In the international climate policy subsystem, the elections and subsequent changes in U.S. climate policy removed the major barrier to renewed negotiations on a post-2000 commitment and legally binding targets and timetables.

The U.S. case also points to a situation in which such a change was necessary but by itself insufficient to cause a major policy change. The economic growth coalition flatly rejected any sort of carbon or energy tax while it was in control of the U.S. climate policy subsystem. The adoption of such a tax became possible when the 1992 elections allowed the precautionary coalition to gain control of the subsystem. This control did not extend to the overlapping tax

policy subsystem, however. Although the policy emanating from climate policy subsystem called for a substantial BTU tax, it was reduced to an insignificant gas tax in the tax policy subsystem.

This example also illustrates how policy change is a long-term process (i.e., taking place over the course of a decade or more). When the Republican Party gained control of the House in 1994, members of the U.S. economic growth coalition were able to exploit the opportunities presented by this system-wide event to reverse, or at least impede, some of the decisions made by the precautionary coalition. In particular, it made substantial cuts in the funding of various programs required to implement the precautionary coalition's goal of stabilizing emissions at 1990 levels in 2000. These cuts were partially responsible for the failure of the United States to meet this goal.

11.2 PROPOSITIONS 3 AND 4: ACTORS, COALITIONS, AND OVERLAPPING SUBSYSTEMS

The second two propositions pertain to the relationships among overlapping subsystems and the effect of these relationships on treaty implementation.

11.2.1. Proposition 3: Actor participation in overlapping subsystems

Proposition (3): The degree to which the content of national government programs are changed to be consistent with an international agreement is directly related to extent to which significant actors the national policy subsystems traditionally responsible for the programs to be changed also participated in the national policy subsystem that was involved in negotiating the agreement.

This proposition argues that the extent to which national government programs are changed in response to an international agreement is a function of the extent to which the subsystems responsible for the programs are nested within the subsystem involved in negotiating the agreement. More cooperation and coordination is likely to occur among nested subsystems because coalitions actors are more likely to share policy beliefs than those in policy subsystems with a lesser degree of overlap. There is also more likely to be a greater correspondence in nested subsystems in terms of both the number of subsystem coalitions and the nature of the power dynamics within the subsystems. Finally, because of the nature of policy-oriented learning is the only mechanism through which belief systems change and cooperation develops, cooperation is likely to be greatest in situations where significant domestic players in relevant national subsystems are able participate in the international fora in which policy-oriented learning is taking place.

None of the cases included an example of completely nested subsystems, as this would require all of the participants in the smaller subsystem to also be active in the larger subsystem. All of the cases demonstrate a range of overlap, however, sufficient to suggest the validity of this proposition. Each of the cases provides examples in which a subsystem responsible for a national program overlapped substantially with the national climate policy subsystem engaged in the international negotiations. Each also provides examples in which there was very little overlap among the subsystems.

In the United States, the experience with the tire-labeling program illustrates a situation in which there was very little overlap between the subsystem engaged in the international negotiations and the subsystem responsible for determining U.S. tire-labeling policy. When the tire-labeling program was proposed in 1993, representatives of the Department of Transportation were the only individuals actively engaged in both the U.S. climate policy subsystem and the U.S. tire labeling subsystem. They were supported in their proposal of the labeling system by Michelin and a few consumer groups, none of which had participated actively in the U.S. climate policy discussions.¹ None of the opponents of the proposal, primarily members of Congress and domestic tire producers and distributors. Although the reduction of ghg emissions was cited as a reason for implementing the program, most of the debate focused on economic, feasibility, and safety issues. Ultimately, opponents in Congress blocked the measure. In doing so, they cited feasibility and utility issues, and made no mention of emissions reductions.

Wind energy policy in the Netherlands and nuclear energy policy in Japan are two more complex examples of this proposition. Both of these cases involved three overlapping subsystems: a national climate policy subsystem, a national energy policy subsystem, and several sub-national policy subsystems. In both countries, there was substantial overlap between the national climate policy and the national energy policy subsystems, but virtually no overlap between the national climate policy subsystem and the various sub-national policy subsystems.

In the Netherlands, coordination among officials of VROM and MEA created the overlap between the two national subsystems. Although not all of the officials involved in each of these issues were active in both subsystems, there was fairly strong coordination among the different departments of each Ministry. None of the regional utilities involved in the development of national renewable energy policy in the Netherlands were engaged in the national climate policy process. However, their views were consistent with those of the MEA, and there was strong cooperation between the utility representatives and MEA officials. As a result, the policies emerging from the national climate policy subsystem and the national climate policy subsystem were consistent with each other.

There was virtually no overlap between the national climate policy subsystems and the various regional and local wind energy policy subsystems in the Netherlands, however. None of the utilities, provincial officials, and local authorities was engaged in the climate policy discussions, nor were any of the local resident who opposed the construction of wind turbines. A few Dutch environmental NGO had individuals engaged in one issue or the other (e.g., Stichting Natuur en Milieu), but not both. In these cases, however, there was virtually no cooperation among these individuals, and the organizations themselves became deeply divided.² The policies emerging from these two subsystems were also divergent, with the national climate policy advocating the development of wind energy to reduce emissions and the local siting policy prohibiting the construction of wind turbines.

In Japan, many of the STA and MITI officials involved in the development of Japan's national nuclear energy policy were also involved in the development of its climate policy, as were some of the major utilities such as TEPCO. This created a substantial degree of overlap

¹ Although Michelin and some of the other tire companies did participate in the 1993 White House climate conference.

² Interview #44. Netherlands Academy of Sciences, Netherlands. Feb., 1989.

between the two subsystems. The results of this overlap can be seen in the strong consistency among the Japan's 1990 Action Program to Arrest Global Warming, its 1993 National Communication and MITI's 1994 Long-Term Energy Supply and Demand Outlook.

As in the Netherlands, however, there was virtually no overlap between Japan's national climate policy subsystem and the various local- and prefecture-level site approval subsystems. None of the local residents and officials involved in local siting deliberations in involved in the national climate policy process, nor was the Environment Agency or MFA involved in local siting policy debates. Although MITI and some utilities were engaged in both subsystems, individuals within each organization were not. Quite a few members of the Kiko Forum that participated in COP 3 were local environmental groups and antinuclear activists. However, these individuals and groups did not become actively engaged in the climate debate until 1996, well after the local policy debates had ended. Furthermore, while they were important members of the precautionary coalition in Japan and supported aggressive reductions in ghg emissions, they did not support the further development of nuclear power to do so.³ Thus there was a fundamental disconnect between Japan's national climate policy goal of stabilizing per capita emissions at 1990 level through, in part, the construction of 20 new nuclear power facilities and the policies of key prefectures and local communities blocking the construction of these facilities.

11.2.2. Proposition 4: Overlapping Subsystems and Policy Change

Proposition (4): The degree to which national government programs are changed to be consistent with an international agreement is inversely related to the number of overlapping national (and sub-national) policy subsystems falling within the policy domain of the international agreement.

This proposition can be viewed as the converse of Proposition (3). In general, the broader the policy domain of an international agreement, the larger the number of national and subnational subsystems with responsibility for implementing various aspects of the agreement. This makes coordination and cooperation among subsystems more difficult, in turn reducing the probability that policies at the national level will be changed to be consistent with the international agreement.

The validity of this proposition is the most difficult of these propositions to support through the case studies used in this analysis, as none of the examples involved fewer than two subsystems or illustrate a situation in which a national government program was changed to be completely consistent with the international agreement. However, all three cases taken together suggest that this proposition would hold up against further analysis. In general, changes in policies falling within the domain of only two overlapping subsystems tended to move in the direction of what was required by the international agreement. On the other hand, changes in policies falling within the domain of three or more subsystems, tended to be very minor if they occurred at all.

Situations in which national policies were changed to be more consistent with the FCCC include the energy tax in the Netherlands and the gas tax in the United States. Although the

³ Although this antinuclear stance was a policy core belief of one faction of Japan's precautionary coalition, it was not a central issue in Japan's climate policy debate and was not included as a policy core belief of the coalition as a whole.

development of Dutch energy/carbon tax was complicated by the overlapping EU tax policy subsystem, it was ultimately determined through coordination between the national energy tax policy subsystem and national climate policy subsystem. Although the final tax policy exempted major energy-intensive industries, it represented a substantial change towards the further reduction of CO₂ emissions in the Netherlands. While the gasoline tax passed by the U.S. Senate in 1993 was substantially different from the BTU tax proposed by the Clinton Administration, passage in and of itself indicates some level of cooperation among the subsystems.⁴

Policy change in the direction of consistence with the FCCC did not occur situations involving three or more overlapping subsystems. Examples of these include wind energy policy in the Netherlands and nuclear energy policy in Japan. In the former case, policies were not changed at the local level to be more consistent national efforts to implement international climate policy. In the latter case, changes were made in local policies that were inconsistent with national efforts in implement international climate policy.

11.3 PROPOSITION 5: TREATY IMPLEMENTATION AND SOURCES OF POWER

The final proposition described in Chapter 5 pertains to the relationship between coalition dynamics and sources of power.

Proposition (5): In the absence of external events, a government program is not likely to be changed in response to an international agreement unless the coalition advocating the change possesses, or is able to acquire, (1) decision-making authority or (2) the ability to offer inducements sufficient to compel the cooperation of those possessing decision-making authority.

With this proposition, I suggested that the five sources of power described in Section II fall into one of two categories: (1) primary sources of power, and (2) secondary sources of power. Primary sources of power, i.e., decision-making authority and, so some extent, the ability to offer inducements, are those sources that enable the possessors with direct control over the decisions being made within the subsystem. Secondary sources of power, i.e., persuasion, deference, and strategic skill, depend on circumstance or the receptivity of those possessing decision-making authority in order to have the desired effect. The ability to offer inducements is also a secondary source of power when the inducements by themselves are not sufficient to compel favorable decisions. With Proposition 5, I suggest that coalitions will not be able to cause substantial changes in government programs to implement international agreements solely through the use of secondary sources of power. This is due in large part to the difficulty with which policy core beliefs change and the large number of actors engaged in the multiple overlapping subsystems that mark treaty implementation.

The cases generally support this proposition. In each situation where policy change occurred, it did so because one coalition or the other gained either decision-making authority or the ability to offer inducements sufficient to gain the support of those possessing this authority.

⁴ Although the U.S. tire labeling program was described in Chapter 8 as involving two subsystem, it can be argued that a third subsystem, the U.S. appropriations subsystem, was also involved in the process, and that it was in this third subsystem that the decision was made to block the program. For this reason, I am not including it in this analysis.

In the United States, for example, U.S. climate policy changed when key decision-makers participating in the economic growth coalition were replaced by members of the precautionary coalition in 1992. Similarly, Japan's national climate policy was changed in 1990 only when former Prime Minister Takeshita, who could offer other LDP members substantial inducements in terms of political support, decided to support the change. Japan's MFA found the potential for increased international influence to be a sufficient inducement to support the policy change. When Takeshita lost his influence in 1993, the precautionary coalition immediately lost its power to enact a proposed carbon tax.

The importance of decision-making authority and the ability to offer inducements can also be observed by comparing situations in which a coalition possessed either decision-making authority or the power to offer inducements with situations in which a coalition had neither. For example, the U.S. precautionary coalition prior to 1992 possessed strong powers of persuasion, deference, and strategic skill derived from strong scientific evidence, internationally renowned scientists and politicians, and the experience of the Montreal protocol negotiations. However, it had neither decision-making authority nor the ability to offer substantial inducements. For the most part, U.S. climate policy during the period remained entirely consistent with the policy core beliefs of the economic growth coalition, and changed only when the economic growth coalition was forced to do so by the threatened loss of public support. Although the precautionary coalition gained decision-making authority following the elections, the economic growth was able to acquire a substantial negative inducement in the form of a threat by the Senate to withhold its consent to the Kyoto Protocol. This balance of power forced the precautionary coalition to retreat from its ambitions to enact substantial reductions in U.S. ghg emissions.

The effect of this balance of power can also be seen the stalemate between the precautionary and economic growth coalitions during the initial negotiations of the FCCC. Although the precautionary coalition controlled most of the decision-making within the international subsystem, the economic growth coalition held as a negative inducement a refusal by the United States to sign a treaty that it was not happy with. Because it was widely recognized that a treaty that did not include the United States would be ineffective, this inducement was sufficient to force the precautionary coalition to compromise on the issue of targets and timetables.

As noted in Chapter 5, I do not describe these propositions as hypotheses because of the difficulties in testing hypotheses with what is essentially a single case study. Examples can be found among the experiences of the United States, Japan, and the Netherlands in implementing the FCCC that support each of the propositions. However, a great deal more research must be conducted before their applicability to the broad range of environmental treaties can be determined. That said, some conclusions can be drawn regarding the implications of this study for the ACF, the climate regime, and international environmental agreements in general. These conclusions are presented in Chapter 12.

CHAPTER 12 – CONCLUSIONS

This final chapter presents some conclusions that can be drawn from this analysis. These conclusions are presented in two parts. In the part, I discuss some of the strengths and limitations of using the ACF to examine treaty implementation and outline some areas for further research. In the second and final part, I suggest some implications of the study for the development and implementation of international environmental treaties in general and future directions for the climate regime in particular.

12.1 APPLICATION OF THE ACF TO INTERNATIONAL ENVIRONMENTAL AGREEMENTS

As was noted above, much of the international relations literature now recognizes the importance of domestic politics in the formation and maintenance of international regimes. None, however, successfully explain the nature of the interactions between international, national, and sub-national decision-making processes, particularly those involving the implementation of international environmental agreements. These explanations are important if we are to gain a better understanding of the problem of “involuntary defection,” or the failure to implement the domestic policies needed to comply with international agreements. The results of this study suggest that the ACF is useful in shedding light on these interactions. In particular, the ACF provides a means for evaluating the efficacy of various approaches that can be used in agreements such as the Framework Convention on Climate Change so that the risks of involuntary defection are minimized. However, additional work is needed to fully explore the applicability of the ACF to these problems.

12.1.1. Breaking Down the “Black Box” of the State

As discussed in Chapter 1, the International Relations literature has traditionally examined interstate relations in terms of their “level of analysis,” or the units in which the independent variables have been conceptualized. International-level (or “systemic”) analyses have been used to explain a state’s position in the international system; domestic-level analyses examine the society, culture, and political institutions of individual states; and individual-level analyses look at the personal or psychological characteristics of individual statesmen. Because these three levels have traditionally been viewed as mutually exclusive, most attempts to explain such issues as treaty development and compliance have treated the state as a monolithic “black box.” This study suggests that the application of the ACF to the development and implementation of international environmental agreements such as the FCCC can be useful in breaking open this black box of the State. In particular, it demonstrates the importance of coalitions of individuals sharing common beliefs and coordinating their activities among the different levels of governance involved in treaty development and implementation.

The ACF portrays the policy process as a function of interactions among competing coalitions within an issue-specific policy subsystem and the effects of system-wide parameters and events on the constraints and resources of the various coalitions. Policies emanating from a domestic subsystem are reflective not of the belief system of the state as a whole but of the beliefs held by the coalition dominating the domestic subsystem at that particular point in time.

Furthermore, the extent of this consistency depends very much on the balance of power of the competing coalitions active within the subsystem. Because the policy process is continual, shifts in this balance of power can result in changes in policy. As was seen in the United States. A shift sufficient to enable a subordinate coalition to become dominant within the domestic subsystem can result in a substantial change in policy. This sudden change can often surprise and appear inexplicable to those expecting the state to behave as a rational, monolithic unit.

In breaking down this black box, the ACF can also help illustrate and explain treaty implementation, or the failure of this implementation. Implementation in the context of the ACF occurs when governmental authorities in the subsystem make decisions regarding the institutional rules, resources allocations, and appointments pertaining to the government policy or program. These decisions result in a set of policy outputs, which in turn produces both intended effects and a range of unintended side effects. Policy outputs will often have a significant effect, intended or not, on other subsystems with which they overlap, and decisions made in the overlapping subsystems will often have a reciprocal effect on the first subsystem.

As defined in Chapter 1, an international regime is the set of “implicit or explicit principles, norms, rules and decision-making around which actors’ expectations converge in a given area of international relations.” An international treaty is the formal codification of these principles, norms and rules. The initial development of an international regime entails a change from the *status quo* of little or no convergence among states to one of some degree of convergence, or cooperation, among a set of states to address a common problem. In order for this convergence to occur, however, each state must change its own domestic policies to be consistent with those of the other states participating in the regime. The development and implementation of an international regime, therefore, is a function of the political dynamics occurring within and among these international and multiple domestic policy subsystems.

As shown in this study, the implementation of the FCCC by countries such as the United States, Japan, and the Netherlands can involve multiple overlapping subsystems at different levels of governance. Decisions made at the international level can be expected to have a direct effect on those made within the national subsystems with which they overlap. Decisions made within these overlapping national subsystems affect not only decisions made in the international subsystem but those made in other overlapping national and subnational subsystems. If the effective implementation of an international treaty requires the convergence of beliefs among all of the coalitions dominating each of the overlapping international, national, and subnational subsystems, one can understand why treaty implementation is so difficult, and why “involuntary defection” poses a significant problem.

12.1.2. Limitations and Areas for Additional Research

There may be limits to applicability of the ACF to international regime dynamics, however. It is well recognized that there are significant differences between international and domestic politics, and the ACF may fail to explain particular phenomena occurring in relationships among states. In particular, it is not clear at this point how the ACF accounts for the involvement of a dominant power in regime creation and maintenance, which is the principle focus of theories of structuralism and hegemonic stability. Before these limitations can be understood, however, further work must be done both in reconciling the ACF with the predominant structural, strategic,

and functional theories of international relations as well as the empirical application of the ACF to a variety of international issues.

The applicability of the ACF to the dynamics of international regimes may also be limited by the sheer scope of the investigation and the resources required to apply it in a complete and comprehensive manner. This study examined the dynamics among 14 subsystems: the international climate policy subsystem and selected subsystems of the United States, Japan, and the Netherlands. Full inventories of subsystem actors and belief systems were conducted for only 3 of these 14 subsystems. If the implementation of each of the 47 measures contained in the U.S. 1994 National Communication is assumed to have involved an average of 2 overlapping subsystems, the full implementation of the U.S. Climate Action Program would have involved at least 90 different subsystems. Documenting the belief systems of the full set of actors involved in these subsystems and analyzing the political dynamics that transpired among them presents a daunting challenge.

These challenges become more daunting for a comprehensive analysis of the full climate treaty regime. If it is assumed that each of the 40 countries (not including the EU) that are listed in Annex 1 of the FCCC are similar to the Dutch case in that their national communications list only 18 measures to be implemented, and that each of these measures involves 2 overlapping subsystems, a comprehensive study would involve more than 1400 subsystems. While such a comprehensive study is clearly not feasible, it is not clear what the maximum feasible study size would be.

Although the resource demands of a more comprehensive study present significant challenges, much could be gained by such a study. It would be particularly useful in providing additional insights into the nature of coalition's domination of a subsystem and the resultant policy changes in the context of overlapping subsystems. The study was also limited in that it examined only a small set of propositions drawn from the initial hypotheses of the Advocacy Coalition Framework. Examination of the hypotheses concerning advocacy coalitions, coalition learning, coordinated behavior within coalitions, and successful professional/scientific fora can also be expected to provide further insight.

Finally, further work needs to be done to explore the nature of power within subsystems and the dynamics of the balance of power among subsystem coalitions. In this study, I suggest that coalitions have five general sources of power. Two of these, decision-making and the ability to offer substantial inducements, can be viewed as primary sources of power (i.e., sufficient to alter or significantly influence decisions by governmental authorities). Persuasion, deference, and strategic skill are secondary sources of power in that, in and of themselves, they are insufficient to alter policy decisions. However, additional work is needed in operationalizing this conception of power independent of policy success. In particular, an approach is needed for measuring the relative power of coalitions possessing different mixes of these sources of power and understanding the implications of these different mixes on policy change.

12.2 IMPLICATIONS FOR THE DEVELOPMENT OF INTERNATIONAL ENVIRONMENTAL AGREEMENTS

Although far from comprehensive, the results of this study suggest a number of implications for the future development of international environmental agreements in general. It also has

more specific implications for the Framework Convention on Climate Change and its Kyoto Protocol.

12.2.1. Implications for International Environmental Agreements

The results of this study have a number of implications for the development and implementation of international environmental agreements. In particular, it suggests that international environmental agreements are more likely to be fully implemented if the issues being addressed in the regime are of limited scope and complexity and the range of actors involved in the regime are well-defined. It also suggests that the probabilities for compliance could be improved if the full range of actors and coalitions involved in implementing a regime also participate in its development.

Limiting Regime Scope and Complexity

This study suggests that an international agreement is more likely to be successfully implemented if limits are placed on its scope and complexity. Such limits would have a number of effects. First, it would limit the number and range of issues that the regime is attempting to address. This would in turn limit the number of potential conflicts among the policy core beliefs of competing coalitions. Such conflicts, when they do occur, will always be difficult to resolve. However, reducing their number improves the odds that policy-oriented learning can resolve some of the differences. In addition, limiting the scope and complexity of the regime would limit the number of overlapping subsystems involved in its implementation. This study suggests that policy change will occur only with great difficulty if three or more policy subsystems are involved. Although it remains difficult if only two overlapping subsystems are engaged in the issue, there is greater potential for some degree of forward movement.

The notion of limiting the scope and complexity of a regime runs counter to the recommendations of those theorists who argue that enlarging the scope of an agreement increases the number of opportunities for side payments and linkages among issues. This side payments and linkages increases the likelihood that those involved in the negotiations will be able to reach a satisfactory agreement at some point in time. However, policy change is a continual process that occurs over time, typically ten years or more. As was demonstrated in all of the case studies, agreements reached in one subsystem at one point in time can often be negated or reversed by decisions in overlapping subsystems at other points in time. Limiting the scope and complexity of a regime reduces the potential for this to occur by reducing the number of subsystems involved in the issue.

Defining Actors And Coalitions

This study also suggests that an international regime is more likely to be fully implemented if the range of actors and coalitions involved in the policy process are clearly defined. This is closely related to that of limiting the scope and complexity of the regime in that it is easier to define the actors and coalitions involved in a regime when the scope and complexity of the regime is limited. However, it also suggests that those involved in the development of a regime be proactive in identifying relevant actors and coalitions and defining their policy core beliefs. This is similar to the identification of stakeholders in a dispute resolution process. Doing so will not make the process of reaching an agreement any easier. Some may argue that it will

exacerbate the tendency of international environmental agreements to be driven by “the lowest common denominator.” However, efforts to identify and define the full range of actors and coalitions involved in the implementation of an international environmental agreement are likely to improve the changes that the objective of the regime would be met.

Involving Relevant Actors and Coalitions in Regime Development

Finally, the study suggests that efforts to involve in the development of an international environmental regime the full range of actors and coalitions responsible for its implement. Doing so will maximize the degree of overlap among the relevant subsystems, in turn improving the probabilities that the overlapping subsystems will be controlled by parallel coalitions. It could also promote the development of interdependencies among subsystems, which also improves the probability of cooperation among subsystems. Finally, it improves opportunities for policy oriented learning, as it promotes the exchange of a fuller range of ideas, issues, and concerns.

Efforts to expand the range of actors involved in regime development could encounter a number of institutional difficulties. For example, the processes through which foreign and domestic policies are developed are often separate and distinct. In the United States, the executive branch is fiercely protective of the President’s exclusive right to conduct foreign policy, and would likely oppose efforts to recognize Congress, state governments, and NGOs as full partners in the international negotiations process.

12.2.2. Implications for the Framework Convention on Climate Change and the Kyoto Protocol

As preparations are being made for the entry into force of the Kyoto Protocol, this study also suggests some ways in which the climate regime can become more effective as these agreements evolve. These include:

- Shifting away from a targets and timetables approach
- Recognizing the political limitations of market mechanisms;
- Developing regional agreements; and
- Coordinating specific policies and measures.

Adopting these approaches may require the international community to make a fundamental shift away from its comprehensive, top-down approach to complex, global environmental problems such as climate change and adopt a more bottom-up, incremental approach.

Shifting away from targets and timetables

This analysis of the experiences of the United States, Japan, and the Netherlands in implementing the FCCC suggest that the targets and timetables approach that is currently embodied in the Kyoto Protocol is not likely to be effective in reducing emissions over the long run. Numerous observers have discussed the shortcomings of this approach, including the short-term nature of the targets, their potential economic costs, their failure to have a substantial

impact on climate change, and the difficulties associated with their enforcement.¹ The results of this study support the view that the targets and timetables approach presents the climate regime with significant implementation, and therefore compliance, difficulties. The major problem with the targets and timetables approach is that those responsible for implementing targets and timetables not involved in their negotiation. The Kyoto targets were negotiated by a very small group of individuals and were given political legitimacy by the approval by heads of state and ratification by legislatures. As shown in these case studies, these heads of state and legislatures often lack the ability or even the authority to enforce the measures needed to meet the targets; i.e., there is little or no overlap among the subsystems in which the targets were negotiated and approved and the subsystems in which the policies and measures necessary to meet these targets are implemented.

Efforts to include in the negotiating process actors and coalitions engaged in the full set of subsystems would address the exclusion issue, as it would increase the amount of overlap among the various subsystems. However, the process itself would become unworkable due to the tremendous number of individuals participating in the process. As noted in Chapter 7, over 15,000 individuals were involved in the international climate policy subsystem between 1988 and 1997. This number could increase into the hundreds of thousands of individuals if the international subsystem were enlarged to include the full range of domestic actors from the 163 countries that are Parties the FCCC.

Recognizing the political limitations of market mechanisms

This study also suggests that the use of market mechanisms such as emissions trading and carbon taxes are likely to have limited effectiveness in addressing climate change. The use of these market mechanisms helps eliminate the participation problem by transferring much of the responsibility for implementation to individuals and economic markets. Developing systems that can use these market forces effectively presents numerous political challenges. As was seen in the cases of both the United States and the Netherlands, decisions regarding taxes, markets, and other economic issues are generally the purview of subsystems dominated by those most affected by the policy outputs from these subsystems. Policies regarding energy and carbon taxes will generally be determined within subsystems dominated by the industries and other entities most affected by them. Furthermore, they will generally be determined on the basis of economic rather than environmental considerations. Although the gasoline tax in the United States and the energy levy in the Netherlands were introduced for environmental reasons, decisions regarding them

¹ See, for example, McKibbin, W. J. and P. J. Wilcoxon. 2004. Estimates of the costs of Kyoto: Marrakesh versus the McKibbin-Wilcoxon blueprint. *Energy Policy* 32, 4: 467-479; Nentjes, A. and G. Klaassen. 2004. On the quality of compliance mechanisms in the Kyoto Protocol. *Energy Policy* 32, 4: 531-544; Gupta, Joyeeta, X. Olsthoorn, and E. Rotenberg. 2003. The role of scientific uncertainty in compliance with the Kyoto Protocol to the Climate Change Convention. *Environmental Science & Policy* 6, 6: 475-486; Babiker, M. H. and R. S. Eckaus. 2002. Rethinking the Kyoto emissions targets. *Climatic Change* 54, 4: 399-414; Cohen, B. C. 2002. The Kyoto instruments: are they adequate for achieving the stabilization of carbon dioxide concentrations? *International Journal of Environment and Pollution* 17, 3: 275-278; Schelling, T. C. 2002. What makes greenhouse sense? Time to rethink the Kyoto Protocol. *Foreign Affairs* 81, 3: 2-+; Corfee-Morlot, J. and N. Hohne. 2003. Climate change: long-term targets and short-term commitments. *Global Environmental Change-Human and Policy Dimensions* 13, 4: 277-293; Victor, David G. 2001. *The Collapse of the Kyoto Protocol and the Struggle to Slow Global Warming*. Princeton: Princeton University Press.

were made on economic and fiscal rather than environmental grounds. Furthermore, they were accepted only after the proposals were watered down to the point that the economic impacts on the coalition dominating the subsystem were minimal.

As was seen in the Netherlands and EU situations, these coalitions may be willing to accept more significant impacts if other countries adopted similar taxes such that the effects on competitiveness are minimized. This would entail coordination among a large number of national tax policy subsystems. Given the many differences among tax systems and economic circumstances among the countries that would be involved in such coordination, it is highly unlikely that parallel coalitions could be able to become sufficiently dominant within all of the overlapping subsystems to ensure coordination among them.

Similar problems face those attempting to develop an international emissions trading system. The Kyoto Protocol calls for the development of such a “flexibility” mechanism, and many analysts argue that it is the most cost-effective means for reducing global emissions.² However, the large number of overlapping international and national subsystems involved in the development of such a system makes the probability that they could effectively coordinate their activities relatively low, at least in the near term (i.e., 20 to 30 years). Even if there is a high degree of interdependence among the subsystems such that the probability is high that all of the subsystems will cooperate with each other, the probability that such cooperation will actually remain low simply because of the large number of subsystems involved.

For example, one might assume that the participation of 20 of the 40 Annex B countries is needed to create a market sufficiently large to function. Each country must agree on three basic program elements (e.g., number of gases covered, industries participating, initial allocation of quotas) if the program is to work. If one assumes that the probability that all 20 countries will agree on all three conditions is 95 percent, the probability that the system will actually become operational is less than 5 percent.³ This assumes that only one subsystem is involved in the decisionmaking within each country. If one assumes that there is sufficient interdependence among the subsystems that there is a 99 percent probability that each will agree to the three basic elements of the program, the probability of success increases to slightly less than 55 percent. However, if one assumes that two subsystems are involved in the decisionmaking within each country, the probability of success falls to less than 30 percent even if there is a 99 percent probability that each subsystem will cooperate with the others.

I use this hypothetical example only to illustrate the difficulties that the large numbers of overlapping subsystems pose for the implementation of complex global environmental agreements such as the current climate regime. It follows, therefore, that this regime can be made more effective if fewer subsystems are involved in the regime and if the subsystems

² See, e.g., Banks, F. E. 2000. The Kyoto negotiations on climate change: An economic perspective. *Energy Sources* 22, 6: 481-496; Wiener, J. B. 1999. Global environmental regulation: Instrument choice in legal context. *Yale Law Journal* 108, 4: 677-+; Jenkins, T. N. 1996. Democratizing the global economy by ecologicalising economics: The example of global warming. *Ecological Economics* 16, 3: 227; IPCC. 2001. *Climate Change 2001: Mitigation. Contribution of Working Group III to the Third Assessment Report of the Intergovernmental Panel on Climate Change (IPCC)*.

³ This probability is determined by the formula $P=(p)^{(c \times d)}$, where p = the probability that a favorable decision will be made (.95), c = the number of countries involved (20), and d = the number of decisions on which all countries must agree. See, e.g., Pressman and Wildavsky. 1973. *Implementation*.

themselves were smaller with more participants. This might be undertaken through a combination of two approaches: (1) replacing the current global regime with a series of regional climate agreements; and (2) focusing on the coordination of policies and measures rather than targets and timetables.

Developing regional agreements

An alternative to the global approach embodied in the FCCC and its Kyoto Protocol would be the development of a series of regional climate change agreements involving various like-minded countries. Each agreement would be tailored to the particular circumstances and needs of the countries involved. This approach presents several advantages. The number of overlapping subsystems and actors within each coalition is reduced, increasing possibilities for including the full range of actors involved in implementing emissions reduction measures. A reduction in the size of the international subsystem and a focus on involving like-minded countries is also likely to reduce the range of issues being considered and the complexity of these issues. Finally, this regional approach may narrow the differences among the policy core beliefs of competing coalitions, increasing the probability that overlapping subsystems will be dominated by parallel coalitions. A narrowing of differences will also promote possibilities for policy change through learning.

Coordinating policies and measures

This regional approach could be combined with the development of sector-specific agreements in which specific policies and measures are coordinated. This policies and measures approach is embedded in the FCCC and was a major priority of countries such as the Netherlands and the United Kingdom during the early phases of the Kyoto Protocol negotiations. However, it was pushed to the background by the emphasis on targets and timetables.⁴

These sector-specific agreements could take a wide variety of forms, including cooperation on emissions standards, technology standards, or even engage in the trading of emissions credits with a sector. A variation proposed by Barrett is a regime in which countries coordinate R&D efforts as well as cooperate in setting of standards.⁵ These approaches would all present similar advantages. Agreements involving a single sector or set of industries would involve a smaller set of actors and coalitions, potentially narrowing the differences among policy core beliefs. A sectoral approach would also minimize the number of overlapping subsystem both within each country and across the regime as a whole.

The adoption of these approaches, however, would represent a fundamental shift in the orientation of the current climate regime. The global, top-down orientation of the current regime was adopted in part because it has been believed the global nature of the problem necessitates a global response, and that all countries should be involved in efforts to address it. Such an

⁴ See, e.g., OECD/IEA. 1995. *Policies and Measures for "Common Action" - Initial Report*. OECD/IEA Joint Project on National Communications under the Framework Convention on Climate Change; Corfee-Morlot and Hohne. 2003. Climate change: long-term targets and short-term commitments; Grubb, Michael and J. C. Hourcade. 2000. Implementing EU Commitments Under Kyoto. In *Climate Change and European Leadership*, ed. Joyeeta Gupta and Michael Grubb, pg. 239-262. Dordrecht: Kluwer Academic Publishers.

⁵ Barrett, S. 2001. Towards a Better Climate Treaty. *Policy Matters*, November.

orientation facilitates efforts to gauge the success of the regime in solving the problem. The ultimate objective of the FCCC is to stabilize greenhouse gas emissions "at a level that would prevent dangerous anthropogenic interference with the climate system." Specific emissions reduction targets provide a clear and unequivocal means by which the contribution of each country can be assessed in terms of achieving this objective.

Adopting a regional and/or sector specific approach would switch the regime from this "top-down" success-focused orientation to a more "bottom-up," incremental approach. Although ensuring compliance with each individual agreement may become easier with this new orientation, assessing the effectiveness of the regime in mitigating climate change would become much more difficult, if not impossible, to assess. It would also become much more difficult to gauge the relative contribution of the various parties in addressing the problem. This may not be a tremendous loss, however, as the current Kyoto targets are widely recognized as making only a very modest contribution towards achieving the FCCC's ultimate objective.⁶

The process of preparing actions to address climate change is complex, and highly dependent on the belief systems of actors dominating the policy-making process. The belief systems of those dominating the international decision-making process may not necessarily be consistent with those dominating the national and sub-national processes. However, it is ultimately the decisions made at these national and sub-national levels that determine whether or not the problem will be addressed. Aspects of belief systems can change through the process of policy-oriented learning, and it is essential that the full range of policy-makers participate in this process. Ultimately, however, the ability of nations to cooperate in making significant policy changes may depend on the rise to political dominance in each country of a group of individuals who share the same core values regarding the need to protect the earth's environment.

⁶ Cohen. 2002. The Kyoto instruments: are they adequate for achieving the stabilization of carbon dioxide concentrations?; Corfee-Morlot and Hohne. 2003. Climate change: long-term targets and short-term commitments.

APPENDIX A:
METHODOLOGY

Appendix A: Methodology

Conducting this study involved several steps, including: (1) defining the boundaries of each subsystem and identifying the major actors participating in them for long periods of time; (2) characterizing the belief systems of these major actors and; and (3) defining the coalitions in each subsystem and exploring the dynamics of their interactions both within each subsystem and among the overlapping subsystems. A number of data collection methods were used to do this, including content analyses of speeches, articles, and other documents; interviews with subsystem participants; and data derived from literature reviews.

Defining Subsystem Boundaries

The first task in each of the cases was to define the subsystem boundaries. Policy subsystems are defined by both a set of actors and a certain “organizational residue.” At the international level, the “organizational residue” consists of the Intergovernmental Panel on Climate Change (IPCC), the Intergovernmental Negotiating Committee (INC) for the Framework Convention on Climate Change, and the Conference of the Parties (COP) to the Framework Convention on Climate Change and its subsidiary bodies. Participant lists from the 1988-1990 meetings of the IPCC, the 1989-1994 meetings of the INC, and 1994-1997 meetings of the COP were used to determine the spectrum of actors participating in this subsystem. Over 12,000 individuals have participated in these meetings, and many of the key actors have been active in all three organizations since their inception. The participant list from the 1988 Toronto Conference on the Changing Atmosphere was also used in this analysis, as it was at this meeting that the initial “Toronto Target” was established.

These participant lists, information available in public documents and the literature, and interviews with key actors within each country were used to determine the actors participating in the national climate change policy subsystems. The United States, the Netherlands, and Japan, like most OECD countries, each have specialized units within their foreign, environment, and other ministries that deal with climate change, and many of the key actors from these units participate in the international subsystem. For the United States, the participant lists from the 1993, 1995 and 1997 White House Climate Change Conferences also provided information on actors involved in the national climate change policy process.

The specific policies and actions listed in each National Action Plan served as the starting point for the investigation into the other national policy subsystems overlapping with these national climate change policy subsystems. News reports and interviews with key individuals associated with these programs were the primary source of information on these subsystems, although secondary literature was also used where was available.

Determining Actor and Coalition Belief Systems

The second task for each case was to determine the actor and coalition belief systems. The principal tool for doing this in the international, United States and the Netherlands climate change subsystems was a structured analysis of over 600 public documents containing over 11,00 statements by various subsystem actors.¹ In the international subsystem, the reports of meetings

¹ According to Sabatier and Jenkins-Smith, a content analysis of public hearing records and transcripts, other government documents, and interest-group publications have a number of advantages over other methods for

of the IPCC, the INC, and the COP were particularly important, as were summaries of these meetings prepared by organizations such as the Earth Negotiations Bulletin. NGO newsletters and reports distributed at these meetings were also used to document beliefs of key actors (primarily in the NGO community) who did not make formal statements at these meetings. In the national subsystems of the United States and the Netherlands, transcripts of Congressional and Parliamentary hearings on climate change were important, as were press releases, transcripts of speeches, and articles and editorials appearing in newspapers and magazines.

The analysis was conducted using the methodology described by Sabatier and Jenkins-Smith.² A short coding framework, shown in Table A1, was prepared describing the range of policy core beliefs held by subsystem actors. The statements contained in the coding framework reflect the range of fundamental policy positions expressed by actors engaged in the climate policy process. They were derived from a preliminary review of documents used for the documents analysis as well as the authors ten years of experience with climate change policy. Table A2 describes relationships among the ACF Policy Core Precepts (Table 3.2) and Coding Framework. Each document was examined in light of this framework, with the statements expressed by each actor scored on a scale of 1 to 5. The belief score for a given actor was determined by the average belief score of the statements contained in each document.

It should be noted here that using this documents analysis approach to assess coalition beliefs in the international and national climate change subsystems presented several difficulties.³ The tremendous number of players active in these subsystems made it very difficult to ensure that the documents collected represented the full range of views. With over 11,000 individuals from almost 1,500 different organizations participating in the international subsystem alone, the task of collecting documents from the representatives of all organizations active in all four subsystems would have required resources well beyond those available for this study.

documenting elite beliefs. It permits a more detailed analysis of beliefs than can be captured by partisan affiliation or interest-group scorecards. It also enables the researcher to monitor a broad range of actors representing interest groups, administrative agencies, research organizations, etc., and public documents spanning long periods of time are relatively easy to obtain and code.

² Sabatier and Jenkins-Smith. 1993. *Policy Change and Learning: An Advocacy Coalition Approach*.

³ Because this analysis was intended to discern a general set of core policy beliefs rather than to measure changes in these beliefs, the belief statements contained in the coding framework tend to oversimplify some very complex issues. As was noted in Chapter 2, a fundamental assumption of this study is that an actor's policy core beliefs do not change substantially over time, and that changes in a coalition's policy core come about primarily from turnover of coalition members. Because the issue of climate change is so complex, controlling for changes in beliefs in this study would have required a far more detailed coding framework. Furthermore, resources were not available to ensure that sufficient documents were available from different time periods for all of the key actors in each subsystem given the tremendous number of individuals involved. While the analysis does suggest that the policy core beliefs of a few individuals did change over time in certain situations, this was not the intent of the study. Periodic reliability checks in which a second person periodically recoded some of the documents were conducted in order to ensure that the documents coding process was consistent over time.

Table A1. Documents Coding Framework

- 1. POLICY CORE BELIEFS CONCERNING CLIMATE CHANGE THEORY AND MODELS**
 - A. Validity of theory that GHG emissions from human activities will cause global warming.**
 1. Theory is not valid/any warming is due to natural events
 2. Theory is highly questionable/any warming is due primarily to natural events
 3. Theory is somewhat uncertain/cause of any warming is unclear
 4. Theory is probably valid/any warming is most likely due to human activity
 5. Theory is completely valid/any warming is due to human activity
 - B. Precision of climate models**
 1. Models are highly inaccurate/completely inconsistent with observational data
 2. Models are generally inaccurate/mostly inconsistent with observational data
 3. Models are of uncertain accuracy/partially consistent with observational data
 4. Models are generally accurate/mostly consistent with observational data.
 5. Models are highly accurate/very consistent with observational data
 - C. Clarity of current climate trends**
 1. The global climate is not warming
 2. The global climate does not appear to be warming
 3. Current trends are unclear
 4. The global climate appears to be warming
 5. The global climate is warming
- 2. POLICY CORE BELIEFS CONCERNING IMPACTS OF CLIMATE CHANGE AND COST OF RESPONSES**
 - A. Threat posed by climate change**
 1. Climate change is not a threat/could have benefits
 2. Climate change is not likely to be a significant threat
 3. Risk is unclear
 4. Climate change could present a significant threat
 5. Climate change is presents a most significant threat
 - B. Economic costs of short-term responses**
 1. Economic costs of short-term responses will be very high/much greater than costs of impacts
 2. Economic costs of short-term responses will be high/most likely to be greater than costs of impacts
 3. Costs of short-term responses are not clear/may be as high as costs of impacts
 4. Costs of short-term responses are likely to be less than costs of impacts
 5. Near-term responses will be much less than impacts/could have economic benefits.
- 3. POLICY CORE BELIEFS CONCERNING NATURE OF POLICY RESPONSES**
 - A. Basis for national policy responses**
 1. Policy responses should be taken only when clearly justified by the science.
 2. Policy responses should be taken when justified for other reasons ("no regrets").
 3. Low cost/cost effective responses are justified now.
 4. Moderate responses are justified now/strong measures should be phased in over time
 5. Strong policy responses must be taken immediately.
 - B. Approach to industrialized country responses/commitments before 2000.**
 1. National actions should be voluntary (i.e., bottom-up approach, no targets or timetables)
 2. National targets may be set according to national circumstances, but no timetable should be adopted
 3. Countries should stabilize emissions, but no timetable should be adopted
 4. Countries should stabilize emissions at 1990 levels by the year 2000
 5. Countries should reduce emissions 20% by 2005 (i.e., top-down approach, Toronto target)
 - C. Commitments after 2000**
 1. No commitments should be made
 2. Further commitments should be made, but only after thorough analysis.
 3. Countries should commit to stabilization/reduction with differentiated targets and/or flexibility.
 4. Countries must commit to reductions with common target for all countries/minimal flexibility
 5. Countries must commit to reductions of 20% by 2005 (Toronto target)
 - D. Mandated/coordinated policy instruments**
 1. Encourage voluntary actions only/no taxes or regulations
 2. Encourage voluntary actions, modest demonstration programs, etc.
 3. Adopt some market-oriented policies (i.e., taxes), encourage voluntary actions.
 4. Adopt stronger market-oriented policies, limited regulatory policies (i.e., technology standards)
 5. Impose full range of market-oriented and regulatory command-and control policies.
- 4. POLICY CORE BELIEFS CONCERNING SCOPE AND COORDINATION OF COMMITMENTS**
 - A. Developing Country vs. Industrialized Country Commitments**
 1. Industrialized and developing countries must make similar commitments.
 2. All countries must commit to specific emissions reductions, but industrialized countries must do more.
 3. Developing countries must commit to limiting growth in emissions.
 4. Developing countries may commit to limiting/reducing emissions voluntarily.
 5. Industrialized countries alone must commit to reducing emissions.
 - B. Coordination or Cooperation In National Responses/Joint Implementation**
 1. National responses may be coordinated among all countries without limits/full joint implementation
 2. National responses may be coordinated among all countries with minor limitations
 3. National responses may be coordinated among industrialized countries/other countries with limits.
 4. National responses may not be coordinated.
 5. National responses may only be coordinated among industrialized countries.

In addition, public documents reflecting the beliefs of many of these participants were simply not available. Every effort was made to collect enough documents from actors representing the major organizations, organization types, countries and country groups such that the average belief scores for each are a reasonably accurate representation of reality. In all, documents were coded for approximately 25 percent of the organizations, and approximately 90 percent of all types of organizations, that participated in at least four international climate change meetings (thus indicating a relatively high level of commitment to the process).⁴ Table A3 shows the percentage of documents coded for government organizations for each country group, and Table A4 shows the percentage of documents coded for each type of non-government organization.

Fundamental Normative Precepts	
1. Orientation on basic value priorities;	3.A. Basis for national policy responses
2. Identification of groups or other entities whose welfare is of greatest concern;	4.A. Developing Country vs. Industrialized Country Commitments
Precepts with a Substantial Empirical Component	
3. Overall seriousness of the problem:	1.B. Precision of climate models 1.C. Clarity of current climate trends 2.A. Threat posed by climate change 2. B. Economic costs of short-term responses 3.C. Commitments after 2000
4. Basic causes of the problem;	1.A. Validity of theory that GHG emissions from human activities will cause global warming.
5. Proper distribution of authority between government and market;	3.D. Mandated/coordinated policy instruments
6. Proper distribution of authority among levels of government;	3.B. Approach to industrialized country responses/commitments before 2000.
7. Priority accorded various policy instrument (e.g., regulation, insurance, education, direct payment, tax credits);	N/A
8. Method of financing;	4.B. Coordination or Cooperation In National Responses/Joint Implementation
9. Ability of society to solve the problem (e.g., zero-sum competition vs. potential for mutual accommodation; technological optimism vs. pessimism).	N/A
10. Participation of public vs. experts vs. elected officials.	N/A

⁴ A tremendous number of individuals and organizations attended only one or two meetings, or each of the three meetings of the Conference of the Parties. These individuals and organizations were more observers than active participants, and should not be considered as members of the various coalitions. I am assuming here that participation in four or more meetings represents a relatively high level of commitment to the policy process.

Table A3 Percentage of Government Organizations Coded In International Subsystem

Organization Type	AOSIS*			CIT/Russia**			EU/Switzerland		
	# Orgs	# Coded	% Coded	# Orgs	# Coded	% Coded	# Orgs	# Coded	% Coded
Agriculture Ministry	3	0	0%	2	0	0%	7	1	14%
Chief of State's Office	3	0	0%	0	0	0%	4	1	25%
Economic Ministry	1	0	0%	2	0	0%	13	0	0%
Energy Ministry	1	0	0%	2	0	0%	7	0	0%
Environment Ministry	22	6	27%	18	6	33%	18	14	78%
Finance Ministry	1	0	0%	0	0	0%	5	0	0%
Justice Ministry	3	0	0%	0	0	0%	1	0	0%
Legislature	1	0	0%	4	0	0%	8	1	13%
Meteorological Service	16	2	13%	15	3	20%	11	0	0%
Ministry of Foreign Affairs/Embassy	33	13	39%	21	8	38%	16	16	100%
Natural Resources Ministry	2	0	0%	0	0	0%	1	0	0%
Overseas Development Ministry	0	0	0%	0	0	0%	4	0	0%
Planning Ministry	7	0	0%	1	0	0%	3	0	0%
Science/Research Ministry	0	0	0%	2	0	0%	8	0	0%
Transportation Ministry	0	0	0%	0	0	0%	4	0	0%
Total	93	21	23%	67	17	25%	110	33	30%
Organization Type	G77***			OPEC****			Other*****		
	# Orgs	# Coded	% Coded	# Orgs	# Coded	% Coded	# Orgs	# Coded	% Coded
Agriculture Ministry	11	0	0%	2	0	0%	0	0	0%
Chief of State's Office	4	0	0%	0	0	0%	1	0	0%
Economic Ministry	10	0	0%	0	0	0%	0	0	0%
Energy Ministry	20	2	10%	6	5	83%	2	0	0%
Environment Ministry	78	24	31%	7	3	43%	3	1	33%
Finance Ministry	3	0	0%	1	0	0%	0	0	0%
Justice Ministry	10	0	0%	0	0	0%	0	0	0%
Legislature	3	1	33%	0	0	0%	0	0	0%
Meteorological Service	76	9	12%	4	0	0%	2	0	0%
Ministry of Foreign Affairs/Embassy	89	39	44%	8	5	63%	4	2	50%
Natural Resources Ministry	10	0	0%	0	0	0%	0	0	0%
Overseas Development Ministry	0	0	0%	0	0	0%	0	0	0%
Planning Ministry	11	1	9%	2	0	0%	1	0	0%
Science/Research Ministry	10	1	10%	1	0	0%	0	0	0%
Transportation Ministry	2	0	0%	1	0	0%	0	0	0%
Total	337	77	23%	32	13	41%	13	3	23%
Organization Type	Other OECD			United States					
	# Orgs	# Coded	% Coded	# Orgs	# Coded	% Coded			
Agriculture Ministry	2	0	0%	1	0	0%			
Chief of State's Office	4	2	50%	1	1	100%			
Economic Ministry	7	1	14%	1	1	100%			
Energy Ministry	3	0	0%	1	1	100%			
Environment Ministry	8	7	88%	1	1	100%			
Finance Ministry	6	0	0%	1	0	0%			
Justice Ministry	2	0	0%	1	1	100%			
Legislature	5	0	0%	1	1	100%			
Meteorological Service	5	1	20%	1	0	0%			
Ministry of Foreign Affairs/Embassy	8	8	100%	1	1	100%			
Natural Resources Ministry	3	0	0%	1	1	100%			
Overseas Development Ministry	3	0	0%	1	0	0%			
Planning Ministry	2	0	0%	1	0	0%			
Science/Research Ministry	5	1	20%	1	1	100%			
Transportation Ministry	2	0	0%	0	0	0%			
Total	65	20	31%	14	9	64%			

*Alliance Of Small Island Developing States (Small island countries)

**Countries in Transition (Former Soviet bloc countries)

***Group of 77 (Developing Countries)

****Organization of Petroleum Exporting Countries

Using the documents coding technique on statements made by national representatives in international meetings also presents several challenges.⁵ Sabatier notes that the beliefs of public

⁵For a discussion of these problems, see generally Larson, Deborah W. 1988. Problems of Content-Analysis in Foreign-Policy Research - Notes From the Study of the Origins of Cold-War Belief Systems. *International Studies*

officials in national policy subsystems are moderated by the need of these officials to be responsive to several different national authorities, statements by government representatives in international subsystems are constrained by the national positions negotiated in their respective national foreign policy subsystems.⁶ As such, wording of these statements reflects not so much the views of the individual making it but the beliefs of the coalition dominating the underlying national subsystem or a compromise between the dominant coalition and one or more minority coalitions. It can be assumed, however, that, in general, the individual making the statement is a member of this dominant coalition if he or she is speaking on behalf of the state, and that the beliefs embedded in the statement are more or less consistent with the individual's own beliefs. Because the goal of this analysis is simply to determine coalition membership, this potential inconsistency does not present a significant problem.⁷

Table A4. Percentage of NGOs Coded in International Subsystem

Organization Type	# Orgs	% Orgs	# Coded	% Coded	% at Mtg Coded
Environmental Organization	73	30.2%	24	45.3%	32.9%
Development/Social Change Organization	24	9.9%	2	3.8%	8.3%
Environmental Policy Research Organization	20	8.3%	3	5.7%	15.0%
General Industry Association	16	6.6%	4	7.5%	25.0%
University	15	6.2%	1	1.9%	6.7%
Fossil Fuels Industry Association	13	5.4%	4	7.5%	30.8%
United Nations/Other International Organization	12	5.0%	0	0.0%	0.0%
Alt. Energy/Technology Organization	10	4.1%	0	0.0%	0.0%
Utility/Energy Distribution Industry Association	10	4.1%	5	9.4%	50.0%
Manufacturing Industry Association	8	3.3%	2	3.8%	25.0%
Science Research Organization	8	3.3%	2	3.8%	25.0%
General Policy Research Organization	6	2.5%	2	3.8%	33.3%
Labor/Workers Organization	5	2.1%	2	3.8%	40.0%
Nuclear Energy Organization	5	2.1%	0	0.0%	0.0%
Economic Policy Research Organization	5	2.1%	0	0.0%	0.0%
Other Advocacy Organization	2	0.8%	1	1.9%	50.0%
Housing/Construction Industry Association	2	0.8%	0	0.0%	0.0%
Transportation Industry Association	2	0.8%	1	1.9%	50.0%
Local/Regional Government	2	0.8%	0	0.0%	0.0%
Utility/Energy Distribution Company	1	0.4%	0	0.0%	0.0%
Manufacturing Company	1	0.4%	0	0.0%	0.0%
Insurance Industry Association	1	0.4%	0	0.0%	0.0%
Natural Resources/Agriculture Industry Association	1	0.4%	0	0.0%	0.0%
<i>Total</i>	<i>242</i>	<i>100.0%</i>	<i>53</i>	<i>100.0%</i>	<i>21.9%</i>

Document analyses were conducted for the international climate policy subsystems, and the climate policy subsystems of the United States and the Netherlands. Tonno Cramer of the University of Amsterdam assisted me by conducting the analysis of documents in the Dutch language. Periodic intercoder reliability tests, in which each of us coded the same English language document, were conducted in order to ensure comparability among the subsystems.

Interviews with subsystem participants and information gleaned from news reports and other sources were the primary source of information on coalition beliefs in the Japanese climate

Quarterly 32, 2: 241-255.

⁶ Sabatier and Jenkins-Smith. 1993. *Policy Change and Learning: An Advocacy Coalition Approach*.

⁷ This inconsistency could present a problem if one were trying to measure changes in beliefs, however. Such an analysis would require many more documents and a more complex coding framework than was used here.

change subsystem, as the resources needed to obtain both documents and assistance in coding them were not available. These sources were also used in all of the case studies to determine the beliefs of coalitions active in the various national and sub-national subsystems overlapping with each national climate change subsystem.

Defining Subsystem Coalitions and Documenting their Interactions

The subsystem coalitions were determined using the documents analysis described in the previous section and information gathered from newspapers, journals, the published literature, and interviews with subsystem participants. The documents analysis was used to identify those actors holding a set of common beliefs. As discussed in Chapter 6, those actors holding beliefs consistent with the precautionary coalition generally received average belief scores of greater than 3, while those expressing beliefs consistent with the economic growth coalition generally received average belief scores of less than 3. Evidence regarding cooperative behavior among these actors was derived the other sources of information as well as documents used in the documents analysis. Actors receiving an average belief score of 3 were included in a coalition if information from these various sources indicated sustained cooperation with other coalition members.

Information on subsystem events and coalition interactions was also obtained through the documents analysis, newspapers, journals, published literature, and participant interviews. Sixty-three interviews were conducted over the course of some 75 hours with individuals in the United States, Japan, the Netherlands, and the IPCC and INC/FCCC secretariats. Because the individuals interviewed were promised anonymity in exchange for candor in our discussions, they are identified in Table A5 only by interview number and organization. Although the scope of each interview varied depending on the role that the individual played, the interviews generally covered coalition belief systems, interactions and coordination, and participation in the national and international subsystems.

Table A5. Subsystem and Organization Affiliation for Study Interviewees (by interview number)

	Subsystem			
	International	Japan	Netherlands	United States
Environmental Advocacy Group		3, 26, 27	54, 51	16
Utility/Energy Dist. Industry Group			49	
Fossil Fuels Industry Group			52	13
General Industry Group		30, 57	48	4, 6
Legislature		31, 56		17
Economic Ministry		24, 25, 63	40	15
Environment Ministry		21, 22, 23, 55, 59	39, 46, 47, 53, 54	2, 8, 9, 18, 20
Foreign Affairs Ministry		34	41, 42, 50	1, 7, 14
Finance Ministry				19
Meteorological Service			43	
Science/Research Ministry			44	12
Transportation Ministry				10, 11
General Press/Newspaper		32, 35		
Science Research Org		36, 37		
IPCC/FCCC Secretariat	54, 58, 18			
University		5, 28, 29, 33, 38	60, 61, 62	