

## CHAPTER 1

---

# Environmental Protection through Flexible Regulation

Over the last three decades, environmental policy became important for almost all countries in the world: industrialized democracies, post-Soviet countries, and developing nations. At the same time, the challenges to political, economic, and ecological sustainability have raised significant questions over what would constitute a good policy and what would be the best strategies to achieve environmental goals. Traditional approaches to pollution control, such as direct regulations, prohibitions, and standards, have brought about considerable achievements in environmental quality, but now are more difficult and expensive to apply (Braadbaart 1998; Richards 2000; Helm 2000; Stavins 2000; Desai 2002; Dietz and Stern 2002; Sterner 2003). The political atmosphere has also changed in many countries in ways that encourage governments to apply more effective, noncoercive, and efficient instruments of environmental policy. Why then do governments still heavily rely on the use of direct regulation? Or, alternatively, what makes governments introduce incentive-based flexible<sup>1</sup> instruments? While innovative flexible methods are very attractive, cost-effectiveness and technical rationality are often at odds with political goals and policy traditions. When governments make decisions about the adoption of alternative policy approaches, they pay more attention to institutional resources and the emerging demands of a political system than merely cost-effectiveness or efficiency of new instruments. Policy instrument choices depend on the continuity with legal and regulatory traditions, the nature of environmental policy authority, the types of established regulations, and the capacity of government to ensure compliance with pollution control policies.

This book highlights political and policy preconditions for the replacement of command-and-control systems with flexible instruments such

as incentive programs, tradable permits, pollution charges, eco-audits, and voluntary agreements. It examines the shift to new modes of regulation and new methods of governmental action. It does so by analyzing the introduction of flexible laws and regulations in air and water quality policies in two large federal states—the United States and the Russian Federation—from the 1960s to the present. These countries were very different ideologically, socially, and economically, especially during the Soviet period, but there are important similarities between them. Large, industrialized, federal states tend to employ analogous regulatory principles in environmental policy, that is, respond similarly to similar problems. Both countries initially used health- and technology-based standards and prohibitions for pollution control, and both countries have been moving toward flexible instruments in policy over a long period of time. The U.S. and Russian cases also reveal that in complex federal bureaucratic societies not all aspects of policy decisions are resolved in the legislatures. In both countries, regulatory agencies take initiatives in introducing flexible instruments, such as pollution trading and fees, and initiating policy changes in the legislatures. Both countries also use incentive-based instruments only as supplements to existing systems of command and control regulations, which ensure enforcement of pollution control requirements.

The important differences in the introduction of incentive-based instruments reveal themselves in the timing, scope, and type of flexible tools in the two countries. The United States focused on various forms of pollution trading early on, while Russia relied on moral suasion and later chose pollution fees and charges based on a complex scheme of standards. Answering the question of what explains these differences—when and how one set of instruments or the other is adopted—becomes important. It is important in its own right, and is also important because more accurate analysis of the comparative benefits of flexible versus command-and-control instruments requires addressing an underlying endogeneity question. If flexible instruments can only be adopted in policy contexts that differ systematically from those in which command-and-control instruments can be adopted, then the benefits that are attributed to flexible tools may derive from a political context that is more conducive to regulatory reform. Comparing the introduction of flexible tools in the countries that have differences in the fundamental political and socioeconomic contexts allows explicating those policy and political contexts and factors that are either favorable or detrimental to policy innovation. For instance, countries with comprehensive and independent environmental agencies are better able to introduce policy innovations than countries in which a pollution control authority possesses very little autonomy or is fragmented or dispersed.

This comparison goes beyond the immediate scope of explaining the adoption of flexible instruments in the United States and Russia. The institutional approach adopted in this study has implications for designing innovative incentive-based approaches in different countries of the world and in different policy areas. Developing countries and transition economies, which undergo rapid industrialization and a transformation to economic and political participation, have expressed interest in applying incentive-based policies for pollution control. The analysis of practical experiences with flexible tools in the United States and Russia reveals that the institutional framework and policy practices of a country play a crucial role in structuring the incentives, options, and constraints faced by policy actors. The institutional framework ultimately shapes the conditions and process of policy instrument adoption, which in turn suggest the extent and success of introducing flexible approaches. Institutional legacies and policy traditions of different countries vary but they orchestrate the way policy and decision-makers experiment with innovative approaches. The political and institutional framework of a country shapes the potential for success or failure of adopting incentive-based flexible approaches.

Analyzing policy choices in the area of environmental protection and pollution control is crucial, as a large array of policies impinge on it, including natural resource management, property rights, taxes, subsidies, credit, and so on. Many countries introduce user charges in such sectors as energy, water and waste management with an incentive effect for pollution reduction in mind. The adoption of incentive-based instruments in environmental policy also provides insights about the introduction of flexible policy instruments in other policy areas. Incentives, such as subsidies, tax credits, and exemptions in the transport, energy, and agriculture sectors, are used in many countries. Not all of these instruments are both economically viable and environmentally friendly. The feasibility of flexible approaches that contribute to environmental sustainability in these sectors may derive from the experiences with incentive-based tools in environmental policy itself. While there is no blanket solution for all policy areas, relevant practices with environmental policy tools propose an analytically useful framework within which policy actors can initiate and develop appropriate tools for their respective policy fields.

Understanding what causes a shift from direct regulation to incentive-based instruments addresses more general underlying questions of why specific policy approaches and the principles they represent find their ways into public policy. There is a worldwide movement toward devolution, decentralization, and the use of innovative approaches in public policy. The choice of policy instruments—achieving desirable results efficiently in terms

of policy frameworks—becomes fundamentally a function of governance criteria. This involves various actors, from national government to regional and local administrations, to society, and economy, in both the design and implementation of policy. Specifically, environmental governance signifies efforts by the state to share its governing capacity through the creation of incentives and voluntary schemes for the regulated community to reduce its negative environmental impacts. The development of policy approaches that lead to policy power-sharing suggests increased attention to policy legitimacy, effectiveness, and accountability.

This introductory chapter acquaints the reader with substantive and theoretical foundations that the balance of the book uses in analyzing whether and when governments adopt flexible policy instruments for environmental protection. It outlines the goals for understanding the institutional capacity and dynamism, types of policy instruments, and new modes of governmental intervention. It initiates a conceptual framework that informs the argument about the adoption of flexible instruments, sets out the research strategy, and presents the plan of the book.

#### POLICY INSTRUMENTS AS GOVERNANCE MECHANISMS

The arguments put forward in this book are informed and inspired by the debates regarding the problems of effective governance. Governance, understood as the emergence and recognition of principles, rules, and procedures, provides standards of acceptable public behavior that are followed to generate behavioral regularities (Nye and Donahue 2000). Governance refers to both the nature and capacity of governmental institutions and to the relationship that governments develop with the communities that they govern through the development of public policies in general and individual instruments of intervention in particular. Exploring how policies are formed and how policy actors generate new instruments and modes of interaction is inextricably bound to explaining the institutional configurations, political action, and policy contexts.

The study of policy instrument development should ideally achieve three following goals. First, the study should enhance our understanding of governmental institutions, their capacities, and modes of governmental regulation. As Maarten Arensten (1998) claims, the main goal of policy making is to develop policy tools. Government actions take on the form of remedial interventions in economic and social life. Various policy instruments with distinctive features are applied in a policy implementation process to realize the goals stated in policies, which in turn results in policy outcomes. Because governmental activity is identified with different forms and degrees

of intervention, different policies can be represented analytically as various instruments (Linder and Peters 1998). The ways public authorities choose policy tools to “purposefully influence societal process”<sup>2</sup> (Bruijn and Hufen 1998, 11) also tend to reflect the institutional background of specific political contexts and the traditions of regulatory development. This knowledge about instruments, their characteristics, and the contexts in which they are used can disclose government’s purposes, capacities, and accomplishments.

Second, the study should specifically improve understanding of the applicability, choice, and effectiveness of environmental policy tools. One consistent statement from environmental economics is that flexible instruments are promising alternatives to direct regulation. The expectation is that economic incentive-based instruments or market-based tools are a more preferable and cost-effective option to achieve environmental policy goals than traditional policy instruments, such as directives and prohibitions, also called command-and-control tools (Baumol and Oates 1979; 1988; Richards 2000; Helm 2000; Stavins 2000). Because polluters face heterogeneous abatement costs, flexible economic instruments leave polluters free to respond to a stimuli provided by the government in a way that they think is more beneficial (Bradbaart 1998).

Economic flexible tools give the choice to the regulated entities on how to comply with environmental standards. They, nevertheless, require significant efforts on the part of government to calculate the level of marginal damage and marginal abatement costs and avoid the distortion of initial motivation to establish an environmental tax base and rate. For example, environmental tax rates frequently are set to satisfy fiscal requirements, and not according to a valuation of environmental damage (Andersen 2000). This produces the opposition to eco-charges by environmental groups, which are skeptical of this sort of revenue collection. Businesses may also oppose charges because they fear immediate costs, despite greater efficiency of such instruments (Buchanan and Tullock 1975). To increase flexibility, applicability, and viability of policy approaches, governments consider and experiment with other incentive-based instruments, which serve as supplements to both direct regulation and economic tools. Among them are informational tools, voluntary agreements, environmental audit and expertise, and reflexive law (Sterner 2003; Orts 1995; Bemelmans-Videc et al. 1998; Tietenberg et al. 1999; Dietz and Stern 2002). Understanding the art and craft of developing and combining these tools is the focus of this book.

Finally, this book goes beyond the study of policy instrument attributes, such as cost-effectiveness, to focus on political and institutional forces impacting the evolution of policy tools and, ultimately, the methods of governance. The notions of cost-effectiveness and efficiency dominate the discourse on flexible policy tools, especially among environmental economists (Baumol

and Oates 1988; Helm 2000; Sterner 2003). They demonstrate that flexible instruments would bring about the desired level of environmental abatement at a lower cost and encourage innovation (Andersen and Sprenger 2000; Harrington and Morgenstern 2004). Because flexible instruments are incentives rather than mandates, they also give the targets the freedom to choose and adapt their activities. However, effectiveness and efficiency are not the only criteria that governments take into consideration in the real world. The background of policy and regulatory realities that represent the compromises of the past among multiple policy actors permit or preclude reforms on policy approaches and tools. As Hans Bressers and Dave Huitema (2000, 67) claim: “This is not a question of “good science” versus “bad politics,” but a recognition of the fact that politics has rationality of its own.”

Many elegant and attractive arguments about flexible instruments face a problem of political and institutional feasibility when assuming that polluters will behave according to the mathematical models, and that rules will be automatically enforced by frictionless bureaucracy. When a theory of incentives versus direct regulations compares ideal characteristics of flexible instruments with the real performance of direct regulations it throws away the most problematic element of policy—public policy making and administration process (Braadbaart 1998; Andersen 1994, 2000). In order to introduce any cost-effective solution, such as environmental charges or trading permits, political and administrative decisions need to be taken about the tax base, the linkage between policy instruments, as well as about assurance that environmental goals are met. A transition to flexible regulations is not a mere change in policy tools. It signifies the changing nature of governmental intervention and requires innovation that derives from extant institutional reality and is based on a complex scheme of actions, as well as on realistic expectations and understanding the instrumentalities of attaining better governance.

## INSTITUTIONS MATTER

A conceptual framework, which provides a context for analyzing policy processes and drives the argument, is essential if the development of policy approaches is to be understood. Such a framework will make sense of complex and often hectic policy making and implementation processes as well as permit improved conceptualization and the integration of findings into the wider literature. In building an adequate framework, decisions have to be made about the scope of analysis and the best way of depicting the dynamics that drive policy change. A policy framework within which instruments are adopted comprises several fundamental elements and potential explanations, including economic, sociocultural, political, and institutional variables.

According to the economic perspective, businesses themselves demand the introduction of incentive-based flexible instruments, especially market-based tools. Enterprises tend to prefer instruments that would provide more flexibility and lower aggregate costs for the industry as a whole (Buchanan and Tullock 1975; Hahn 1989). Flexible market-based approaches are more cost-effective than direct regulation, but, in many cases, they are most cost-effective in relation to the costs to society. They may vary in proportion to costs imposed on enterprises. The use of market instruments does not always guarantee that industry's compliance costs will be less than the compliance costs of direct regulation. Moreover, direct controls usually allow a certain degree of leeway for industries through negotiations with a regulatory agency or court appeals (Baumol and Oates 1979). It would follow that industry may even oppose market instruments if the latter require immediate increase in costs, or enterprises may prefer those tools that minimize financial burdens placed on industry (Keohane et al. 1998). Cost-effectiveness as an attribute of instruments themselves is not necessarily the major concern for industries. Even when economic flexible instruments do not entail visible extra costs for industry and when industry pressures governments to introduce flexible economic tools, governmental agents have to act under institutional constraints. Governments will have to account for distribution effects, the possibility of adaptation to existing regulations, and general implementability of the instrument. What is needed then is a framework that is sensitive to the preferences of economic and governmental actors and to the institutional constraints facing them.

An explanation of the adoption of flexible instruments that emphasizes the role of interest groups in influencing policy change and determining policy approaches is certainly a possibility. Consistent with the interest representation perspective, the adoption of policy instruments depends on inputs from various interests and how these interests are organized (Crepaz 1995). Interest groups may support or oppose certain policy tools that they perceive to be beneficial/detrimental for their own purposes or general societal concerns. Many environmental groups favor direct regulations, uniform standards, and strict deadlines to control pollution; many business interests seek to promote flexible standards and economic incentives (Bailey 1998). In some instances, however, business groups advocate uniform pollution standards and environmental groups support flexible approaches. The U.S. auto producers advocated national air pollution standards in the 1960s, while some major environmental groups welcomed emissions trading in 1990. The ability of interest groups to influence the development of policy tools depends on the timing and access of groups to formal political institutions, the political opportunity structure, and the relationship of groups with the government. To account for these facts, an explanation is needed that acknowledges that political and policy factors beyond interest groups shape the process of instrument adoption.

Explanations of instruments choice based on a sociocultural perspective can help to account for the determinants of policy change. The sociocultural framework argues that ideas, beliefs, and cultural experiences shape the way policy instruments are adopted (Linder and Peters 1989). Introduction of instruments may represent a type of socially constructed processes whose value and meaning are reconstituted over time (Steinberger 1980). On the one hand, such an approach admits as relevant the beliefs and perceptions of the actors involved in instrument choice. On the other hand, we can expect interpretations of an instrument and its context to be embedded in and vary according to the source. It would reflect values that are at least in part related to more easily identifiable factors, such as professional training or affiliation with a particular governmental body. The training and experience of policy makers and regulators may make them more comfortable with one type of policy instrument rather than another. The experience of different countries with various policy tools demonstrates an incremental character of instrument development. This may mean that either policy actors' perceptions and beliefs do not change fast, or that there is not enough influx of people with different training or beliefs, or that existing institutional framework and regulatory traditions affect the pace of policy development. The danger will lie in the failure to recognize that government institutions endow various policy actors, and specifically government officials, with properties that allow or preclude change in policy approaches.

Recognition that government institutions and a path of regulatory development are central to the choice of policy approaches is essential if a plausible explanation of the instrument adoption is to be produced. An explanation of the type, scope, and timing of the introduction of flexible tools that is centered on institutions is able to provide the attention to political and policy dynamics that is lacking in other frameworks. Policy instrument adoption, although in many cases influenced by multiple stakeholders, cultural, ideological, and external factors, involves a fundamental choice on the part of the government. The focus of this book is on governmental institutions and policy structures that ultimately influence the interests of nongovernmental actors and structure the external forces, as well as react and make policy priorities based on the inputs from actors outside the government. The important emphasis is given to institutional dynamism and its consequences for policy instrument choice. A conceptual framework that treats institutions as static and closed entities would be incomplete. It is important, then, to look at the location and nature of governmental institutions, assess established institutional practices, and analyze their contexts and capacities over time to explain the introduction of flexible instruments.



## INSTITUTIONAL FACTORS AND FLEXIBLE TOOLS

This book starts with the premise that flexible environmental policy instruments can improve policy implementation and bring about further improvements in environmental quality. It also claims that the introduction of flexible incentive-based tools is not straightforward. A record of different countries demonstrates that governments, even having realized the advantages of flexible instruments, do not always choose them because governmental actors operate in a political system and are constrained by institutionalized practices and policy traditions (North 1989; Jänicke 1992; Dryzek 1997; Andersen 2000). This book's analysis of almost fifty years of experience with environmental policy approaches in the United States and Russia demonstrates that the choice and design of policy instruments are heavily reliant on the distribution of political power and on the established institutional framework of a country. Throughout the book, I argue that the path of institutional change shapes the evolution of policy instruments and is influenced by constraints resulting from the past and the consequences of numerous incremental choices of policy actors, which frequently alter these constraints.

The argument has four major points. First, the adoption of policy instruments is not simply deduced from the attributes of instruments, but is conditioned by policy contexts in general, and specific institutional practices in particular. In the words of Majone (1989, 5), "laws, regulations, norms, organizations and decision-making procedures" serve as institutional constraints for the adoption of flexible instruments. Second, policy choices made in the past affect the availability of future options. Established practices put a check on the introduction of new policy tools and new government strategies. These established institutions may serve as constraints if new policy instruments challenge the standard operating practices, or they may serve as channels for policy innovation if new tools are adopted along the lines of regulations and practices that are already in place. Third, flexible instruments are a part of a regulatory toolbox. They are only supplements to existing rules and regulations. Flexible tools do not replace regulations, which remain in place to provide assurance that policy goals are met. Fourth, the introduction of flexible instruments suggests a shift toward new modes of governmental action. It assumes policy formation and implementation that generate incentives and focus on desired outcomes by providing economic and societal actors with greater flexibility for responding to policy concerns and encouraging innovation.

The choice and development of policy instruments are not "free" (Ringeling in Bagchus 1998). The ways in which political institutions,

structures, and capacities work can help explain policy instrument adoption. The theoretical framework and the cases analyzed in this book suggest specific propositions regarding the institutional and political factors that shape the process of adopting flexible instruments. These factors are the nature of environmental policy authority, the initiatives of administrative agencies, the type of extant regulations, accountability measures, and a level of burden for administrative agencies.

Flexible approaches are more likely to be established and sustained when a comprehensive, independent, and centralized environmental agency provides for guidance, coordination, and consistency in policy choices. Centralization and concentration of policy authority are appealing as a means to secure effectiveness, performance, and goal achievement. Centralized authority is also conducive to policy consistency: a consistency not only between the legislative intent and implementative standards, but also among the specific policy decisions built on those standards (Lundqvist 1980). While centralization of authority may be seen as an attribute of direct regulation, and decentralization, on the other hand, as a vehicle for competition and innovation, the uneven character of policy innovation and change remains a constant concern for policy makers in federal systems (Rabe 2000). Environmental problems are transboundary in nature, and to the extent that a state or a region covers more than one jurisdiction, the authorities should maintain some consistency in key design elements of the program. To ensure that policy provisions are consistent and fungible across jurisdictions, flexible tools require common design elements, including standards for determining applicability, pollution measurement and reporting, and enforcement (U.S. EPA 2003a). In addition, placing environmental responsibilities in an independent agency prevents the fragmentation of environmental authority among agencies with the goals of commodity development, thus precluding a conflict of interests. This in turn creates an institutional foundation for addressing a whole range of environmental concerns and developing tools to cope with pollution. The attention given to a comprehensive environmental policy authority does not deny the trends toward devolution, but rather advances understanding of the patterns of policy development.

In the United States, a fundamental structural achievement at the dawn of the environmental era was the establishment of a centralized administrative apparatus, the Environmental Protection Agency. Centralization of policy authority was seen as contributing to policy consistency, where the agency provided states with guidance, technical, and regulatory assistance. Concentration of policy authority in the EPA resulted in significant leadership of the agency to introduce multiple innovative tools. It was the EPA that developed emissions trading schemes and guided states through the establishment of trading approaches in the State Implementation Plans.

Where the states find it difficult to cope with the direct regulation, the federal government's greater insulation from powerful local interests gives it the opportunity for leadership.

A major structural obstacle that Russia inherited from the Soviet Union is the fragmentation of administrative responsibilities and constant bureaucratic reorganization. While centralization of authority is still a considerable tendency, a lack of a strong and independent federal environmental agency and a duplication of functions among regional agencies contribute to the difficulty of using incentive-based tools. The system of pollution charges, however, was put in place by a central federal agency, the State Committee on Environment, while it was still in existence.

The introduction of flexible instruments also depends on the initiative of regulatory agencies. Regulatory agencies can initiate a legislative response, take part in creating policy provisions, and, consequently, instruct a change in policy. The traditional dichotomy of "policy" and "administration" is challenged by the fact that regulatory agencies do not only carry out clearly understood directives from the legislature but also independently shape those directives and exercise discretionary policy authority while translating the intentions of statutes into specific government actions (Harmon and Mayer 1986; Frederickson and Smith 2003). Because administrative agencies routinely advocate values and decide who gets what, when, and how, administration is viewed as a highly independent force shaping political decisions (Waldo 1948; Meier 1993).

Environmental regulatory practice, rich with political implications, shapes the impact of regulation as much as the formal language of law. The task demands of pollution control increase bureaucracy's influence in a policy process. Agencies armed with a variety of enforcement options are in the position to select those options they believe will best achieve their purposes. Moreover, regulators seek voluntary compliance. They want to avoid penalties as a means of ensuring compliance because resorting to administrative or judicial proceedings will create a protracted, inflexible process with no assurances that polluters will be compelled to control emissions speedily and efficiently (Rosenbaum 2002). The use of regulatory discretion over pollution control and prevention may allow regulatory agencies to achieve more pollution abatement than would be in the case if they insisted on stringent controls and immediate compliance.

In the United States, the EPA shaped the process of adopting flexible tools. Emissions trading, voluntary pilot projects, audit, and self-disclosure policies came out of the EPA's daily struggles. Congress and courts established the outer limits of possibility, but the decisions that make a difference to those concerned with the outcome were made by the agency. In water quality policy specifically, stifled by the rigid technology requirements of the law,

the EPA and state agencies still experimented with and designed a system of variances and water pollution trading to alleviate the administrative burdens and burdens placed onto different categories of industries.

In Russia, the introduction of incentive-based instruments belongs to multiple regulatory agencies, including an environmental regulatory authority, as well as some initiatives of resource utilization ministries and departments. A complete agreement on a scheme for pollution charges is difficult due to the fragmentation of policy authority and a relative lack of aggressiveness from the Ministry of Natural Resources, which allegedly should provide leadership in establishing flexible regulations.

The evidence most strongly indicates that flexible instruments that do not require a fundamental reorganization of the regulatory practices that are already in place are much more easily introduced and accepted. This suggests that new flexible instruments should be based on or implanted into the existing framework of regulation, and they should not place many additional burdens on regulatory and administrative processes. Direct regulation provides standards for behavior and a strategy directed at many. Regulatory agencies and the regulated communities routinely work with, apply, and enforce regulations. The adoption of flexible tools requires their institutionalization. New instruments have to be based on common understandings, rules, and procedures. They have to satisfy standards of fairness, certainty, and procedural justice, which require administration and monitoring (Mann 1982). The type of a regulatory framework and existing standards bear a significant influence on the type of new flexible instruments. As Robert Hahn (1989, 107) argues: "Virtually all environmental regulatory systems using charges and marketable permits rely on the existing permit systems. Most of these approaches were not implemented from scratch; rather, they were grafted onto regulatory systems in which permits and standards play a dominant role."

Creating and legitimizing new instruments require the evaluation of compatibility with existing standards and operating procedures. Merely challenging the authority of existing instruments is not sufficient for flexible instruments to become an integral part of regulatory structures. Flexible instruments are novel policy approaches that build on aspects of organization and legitimacy found in conventional regulatory practices. Such incremental policy change does not mean an impediment for better practices, but rather the process of "adjusting to new uncertainties by improvising on practice routines that new [approaches and tools] emerge" (Stark 1996, 995).

The U.S. EPA's innovation and reinvention strategies are usually designed within existing agency programs but are aimed at streamlining regulation and improving compliance. All flexible tools are evaluated against the existing regulatory framework, which allows or impedes the introduction

of new tools. Initial command-and-control air policies based on ambient quality standards and quantitative emission limits accommodated emissions trading. In water policy, however, prescriptive and design-based standards did not leave much space for innovation and flexibility. Only with a shift to performance-based standards could regulators turn their efforts to developing various techniques, including flexible instruments such as water quality trading. While direct regulatory programs are still a core of the U.S. environmental system, they are constantly augmented by new instruments to meet current and future societal demands.

The introduced system of pollution charges in Russia is also integrated into the existing system of emission limits in which maximum allowable levels of pollution were established, and permits issued for each enterprise. Calculations of charge rates and indices come from already established pollution limits for many enterprises and approved federal or regional environmental programs, which provide an incentive for the regulatory agencies to work with the charge system.

Politicians and regulators also want to have as much certainty about the place and pace of pollution reduction with flexible instruments as they believe they can achieve with direct controls. They want to ensure accountability of the new approaches by backing them with existing standards, requirements, and penalties. This helps explain why flexible instruments are introduced as supplements to command and control tools, but not as a complete replacement of direct regulation. Provisions for noncompliance create a framework of oversight and enforcement that will hold participants accountable for their activities and ensure compliance with the program's requirements, which creates a primary basis for accountability.

In the United States, penalties, fines, as well as civil and criminal liability for noncompliance are authorized by law as well as cemented in EPA regulations. These provisions in pollution trading schemes and multiple other flexible approaches add credibility to new tools of regulation. They also provide a constant evaluation base of the workability of flexible instruments and help ensure that environmental goals are met. The Russian system of emission charges also includes direct regulation requirements for noncompliance penalties and compensation for the damage to the environment. By aligning with law, preserving the system of enforcement, and indexing the charges based on volume and toxicity, regulators aim at ensuring that it is more expensive to pollute than to comply.

Flexible tools are rarely given a chance to operate by themselves, and yet they help provide more efficient incentive and choice-based ways for the regulated communities to comply with pollution control requirements. At the same time, regulatory agencies themselves want more efficient and flexible ways to achieve policy goals and manage their programs. The literature

on compliance in environmental law and regulation (Mitchell 1994; Brown Weiss and Jacobson 1998; Hatch 2005) advises that the problems of regulatory effectiveness suggest that the adoption of certain types of tools may improve the implementation of policies. The more difficult it is for regulators to fulfill environmental requirements with command-and-control, the more likely that they will experiment with alternative flexible approaches. In cases when a regulatory agency can identify a specific source of pollution or when a desired pollution level might be close to zero, applying direct regulation may be the most straightforward and most effective solution to the problem (Baumol and Oates 1979). In cases where command-and-control practice proves incapable of tackling environmental problems generated by its functioning, policy and decision-makers strive to improve implementation to achieve better environmental results. An impetus for adopting more efficient and effective practices comes from two sources. First is the acknowledgment of a persistent concern to which no existing strategies provide a satisfactory answer (Suchman 1995). Second is a desire of decision-makers to work within the framework of rules that promotes public acceptance and confidence in the instrument as well as aids regulatory agencies themselves in program design and implementation.

Introduction of flexible instruments in the United States has been aimed at increased cost-effectiveness of the programs, voluntary attitudes that build mutual understanding and trust, but also at reduction of implementation burdens by agencies. To ensure effective implementation of air and water quality programs, a variety of flexible instruments were initiated. In Russia, the difficulties of attaining established goals through traditional methods of simply requiring compliance with the strictest standards facilitated the introduction of pollution charges. The charges are aimed at providing incentives for polluters to reduce environmental damage and generate revenue to help pay for public environmental expenditure and support already established goal-oriented programs. The introduction of flexible regulations serves as an important mechanism for the enhancement of regulatory and administrative capabilities of agencies themselves.

The importance of institutional factors reveals itself in the way they shape the process of the introduction of flexible instruments. Innovative incentive-based instruments have a better chance to be adopted when a comprehensive environmental agency provides for coordination and consistency, where governmental regulations become a source of policy provisions, where flexible tools are grafted onto existing regulatory systems and improve implementation practices. The design and introduction of policy tools strongly depend on the location and nature of policy, the existing regulatory traditions, and administrative capacity for implementation.

COMPARATIVE INSTITUTIONAL RESEARCH:  
STRATEGIES, CASES, AND LIMITATIONS

Exploring how policies are formed and why policy actors generate new policy instruments is inextricably bound to explaining the institutional configurations and political and regulatory action. This requires highlighting the development of political and administrative institutional contexts in which policy struggles unfold. Contemporary comparative institutional research on environmental politics and policy presents an effective opportunity to uncover the modes of government intervention and the development of innovative approaches.

This book contributes to these research efforts by studying why, how, and when different governments pursue particular policy approaches. It employs a comparative institutional method to environmental policy research because, in the words of David Vogel (1987), such an approach can contribute substantially more to our understanding of different national styles in policy design and regulation, the significance of these differences, and their historical and institutional roots of policy changes. A comparison is an especially valuable tool because the goal of this book is to investigate not only what policy instruments have been adopted in the United States and Russia, but also why public authorities have created particular instruments. It permits distinguishing the features of environmental regulation in both countries, and explicating the most important (institutional) factors that shape each country's regulatory choices.

There are advantages and disadvantages to binational and multinational comparisons (Vogel 1987). Binational comparisons are better able to explain national differences in regulatory policies. Not only is the number of variables more manageable, but it also gives a better position to engage in a more detailed analysis of the institutional contexts within which policy tools are developed. In addition, the historical dimension and the attention to institutional legacies of the countries tend to restrict the comparison to two countries.

I selected the United States and Russia for several reasons. The U.S. environmental policy process, including that of instruments' choice and application, are dealt with extensively in the literature (e.g., Tietenberg 1985; Vogel 1987; Stavins 2000, 2003; Sterner 2003; Harrington, Morgenstern 2004). There is a large amount of research on the politics of environmental administration and management (e.g., Lieber 1975; Mann 1982; Rosenbaum 1995; Portney and Stavins 2000). The U.S. model of environmental policy is usually compared to the European environmental policy institutions and styles (e.g., Lundqvist 1980; Vogel 1986; Pfander 1996; OECD 1997; Bruijn

de and Norberg-Bohm 2005). The outcome of these studies is an understanding that environmental policy in the West, and especially in the United States, has been the focus of a continuous political struggle, and that rising awareness and criticism about established environmental programs result in a multiplicity of efforts to experiment and apply new policy approaches. Environmental quality control is obviously a concern for all industrialized countries in the world, not just Western societies. As Barbara Jancar (1987, 5) notes, “there is not a single industrialized country that has not taken a proenvironmental stand” and where a governmental response has not developed to cope with the problems of pollution. Russia as a large industrialized country has also been struggling with pollution control, the institutional design of environmental authorities, and policy instrument options. While Russia looked very different from the United States, as well as any other Western country a decade or so ago, now it is a country in transition, whose dramatic changes in economy and society make it more like a Western country. Moreover, in its transition and search for new modes of governance, not just in the environmental protection sphere, Russia is looking closely at the U.S. experience, but is studied much less in this regard than other industrialized countries or countries of the post-Soviet block.<sup>3</sup>

By comparing the U.S. environmental protection institutions and techniques and the Russian policy instruments and practices, this book unravels the structural and historical constraints that institutions place on policies and instruments. It is not presumed that this is a comparison between countries that are similar. However, we see similar processes in the two countries that are different. The realities of environmental policy experiences and a closer examination of policy processes in the two countries demonstrate that, notwithstanding the socioeconomic systemic differences, significant parallels exist between them. Similarities in management philosophies and policy methods are reflected in Goldman’s “convergence” approach: similar problems drive similar solutions (Goldman 1972). In the United States, environmental protection was not left to markets alone. Rather, it predominantly embodied governmental direct regulation to discontinue treating the environment as free goods. Similarly, the Russian government had no other choice but to apply direct regulation. Marxist ideology placed the value on the objects that incorporated human labor, treating the natural environment as free goods. Because all the natural resources were the ownership of the state from the beginning, to prevent the overexploitation of cost-free resources, the government developed direct regulation methods.

An increasing concern for the environment, the often-limited and inadequate performance of direct regulation, and a search to reconcile economic and ecological imperatives resulted in a move toward regulatory



reform and the introduction of flexible tools in both the United States and Russia. The type, scope, and timing of the introduction of incentive-based instruments in the two countries differ. The comparison demonstrates that these variations in the introduction of flexible tools depend on the structure and location of policy authority, the regulatory traditions, and institutional capacities in both countries.

A comparison of policy choices within and across cases provides a detailed analysis of the individual policy instruments and the conditions for their adoption at particular times, but a formulation of a very general argument may suffer. At the same time, the ability to generalize from the comparison depends on which institutional factors are involved. For example, many countries have established environmental protection authorities and pollution regulation requirements that are not dissimilar to those of the countries studied here. In addition, many countries in the world are searching for more effective ways to protect the environment, and consequently for models of what to do and what not to do when designing new approaches. Traditional discussion of the variation in the effects of direct regulation versus flexible tools in many countries has been one-dimensional—"devoting attention to the choice of instrument while ignoring the preconditions of applying any instrument effectively" (Afsah et al. 1996, 14). Explaining when and how one set of instruments or the other is adopted has received considerably less attention. It is not only important to simply choose an instrument, even if it is masterfully crafted in one country. It is more important to understand what conditions allowed this instrument to be crafted and adopted. On the one hand, this process may take the form of matching instruments to a country's conditions, including institutional design characteristics. On the other hand, there may be a need to develop or redesign domestic institutions before a desired instrument can be adopted.

Another challenge in a comparative research is to give adequate representation and meaning to the concepts and equivalent treatment of measurement of concepts. The goal is to provide concept definitions that have equivalent connotations in different countries and in different policy areas. In each country, air and water quality policies are selected because they have been and remain major targets of environmental policy authorities in the United States and Russia, and because they are similar environmental media. Obviously there are differences in both regulatory approaches used in these policy areas in both countries and in the application of such concepts as 'standard.' In the United States, different types of standards formed the basis for policy in air and water protection. For instance, performance standards prevailed in air quality policy and technology requirements dominated water quality policy. In Russia, very similar standards shaped air and water policy,

but the nature of environmental agency changed over time. For instance, the federal agency responsible for environmental protection was reorganized and renamed multiple times.

To overcome possible confusion, this book proceeds along the following lines. It provides the definitions to concepts that are differentiated geographically, politically, and/or linguistically. The book keeps the meaning that relates to key concepts and terms consistent within and across cases. It explores factors that influence the introduction of flexible instruments within countries through the lens of historical institutional analysis, and it uses comparative institutional analysis for cross-case and cross-country study. Each empirical chapter explains and analyzes the chosen policy instruments and alternatives to those instruments. Specifically, the emphasis lies in the explanation of the nature and location of environmental authority within governmental structure, and the nature of the decision-making structures, different policy functions, and levels of government for each country.

Still another challenge in a case study design that employs a qualitative comparison is to monitor and assess whether the identified institutional variables or some other factors more plausibly explain the introduction of flexible tools. While making reliance on full-fledged controlled observations is a difficult procedure at best, relying on a robustness of process tracing helps one to reduce the risk of confusing the direction of causality. To explore a chain of events and reveal the patterns of institutional existence that impact policy instrument choices I develop a causal story including supporting empirical evidence and demonstrating how specific policy and institutional factors led to the adoption of various policy instruments. All four cases are divided into time periods and studied longitudinally by looking at the processes over time through multiple observations, not just by studying past events. This enables a sustained analysis of policy innovation patterns over time that could not be achieved through a straightforward technical exercise of matching instruments with particular policy problems.

Because the purpose of the book is to explain the development of policy approaches over a long period of time in different settings, it must rely on the written record. Obtaining such data may pose some challenges such as changing ways of understanding and reporting policy innovation. Using contemporary definitions is probably the only way to deal with this difficulty. I analyze legislative and regulatory activity in air and water quality policy in the United States and Russia from 1960 until the present by examining the content of the relevant U.S. and Russian environmental statutes and regulations, legislative history, and court decisions. I also searched and studied relevant journal articles, press releases, governmental documents and reports, and nongovernmental groups' publications that deal with air and water quality policy in both countries.

Without a doubt, other strategies can be adopted to explain whether, when, and how governments introduce flexible policy instruments for environmental protection. The hope is that current analysis enables constructing analytic claims about regularities and relationships between the institutional factors and the introduction of flexible tools. The book presents one effort to enhance our understanding of the conditions necessary for diversifying policy approaches so that we can apply them more successfully.

## OVERVIEW OF THIS BOOK

A conceptual framework that views policy changes through the lens of institutional development is presented in chapter 2. The chapter discusses the justifications, virtues, and failures of governmental regulation, as well as the concepts of policy choice that instruct us about the preferred and pursued policy alternative. It reviews the types of policy instruments and identifies the major factors hypothesized as explaining the introduction of flexible approaches.

Chapters 3 and 4 explain how and why flexible incentive-based instruments have developed in the U.S. air and water quality policies, respectively. The challenge, these chapters argue, is to understand that the introduction of flexible approaches depends on consistent rule-making, attention paid to past practices and experiences, and mechanisms of public accountability. These chapters also place these findings in the larger context of the rise of governance theories about policy design, implementation, and delivery.

Chapters 5 and 6 analyze air and water policy strategies in Russia during the Soviet and post-Soviet times. They demonstrate that, notwithstanding many instrumental innovations, it is much more difficult to establish and implement flexible approaches in a system in which institutional practices and jurisdictions established in the past are not only prevalent but also ineffective. They also link the discussion about policy innovation to the debates on shifts in governance strategies in transition economies.

In chapter 7, the book integrates the findings from the case studies and emphasizes that flexible instruments shift a focus from a standard setting toward generating incentives and focusing on desired outcomes by providing economic and societal actors with greater flexibility for responding to policy concerns and encouraging innovation. It concludes with a discussion of political and policy implications of the introduction of flexible instruments for environmental policy. The U.S. and Russian experiences also hold useful lessons for many transition economies and developing countries, as well as insights for improving performance in other policy areas. The diversification of policy instruments helps improve effectiveness and efficiency of policy design and implementation, as well as streamline policy decisions.

The book ultimately raises questions of feasibility of policy changes and good governance. Policy innovations tend to reflect the institutional background and the configuration of political forces in a country. The introduction of new policy tools is not plainly deduced from inherent characteristics of instruments, and solely economic perspectives are insufficient to guide instrument choices. The adequacy and legitimacy of particular choices are bound up with legal, political, and institutional factors that operate in a particular country. The introduction of policy instruments is a political process and an essential part of increasing policy effectiveness, capacity, and accountability that characterize good governance.