Environmental Politics in Japan, Germany, and the United States

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Contents

Figures

Tables

List of abbreviations

AGBM	Ad Hoc Group to the Berlin Mandate
AIJ	Activities Implemented Jointly
AOSIS	Association of Small Island States
API	American Petroleum Institute
BBU	Bundesverband Bürgerinitiativen Umwelt
BDI	Bund der Deutsche Industrie
BTU	British Thermal Unit
BUND	Bund für Naturschutz Deutschland
CAN	Climate Action Network
CASA	Citizens' Alliance for Saving the Atmosphere and the Earth
CCX	Chicago Climate Exchange
CDU	Christian Democratic Union
CFCs	chlorofluorocarbons
CMA	Chemical Manufacturers' Association
CNIC	Center for Nuclear Information
CO_2	carbon dioxide
COP	Conference of the Parties
CSU	Christian Socialist Union
DM	Deutsche Mark
DNR	Deutscher Naturschutzring
DSP	Democratic Socialist Party
EC	European Community
EDF	Environmental Defense Fund (Environmental Defense)
EMAS	Environmental Management and Audit System
EPA	Environmental Protection Agency
EU	European Union
FCCC	Framework Convention on Climate Change
FDP	Free Democratic Party
FOE	Friends of the Earth
FRG	Federal Republic of Germany
GAO	General Accounting Office

GCC	Global Climate Coalition
GDR	German Democratic Republic
GDP	Gross Domestic Product
GLOBE	Global Legislators Organization for a Balanced Environment
GNP	Gross National Product
HCFCs	hydrochlorofluorocarbons
ICLEI	International Council for Local Environmental Initiatives
INC	Intergovernmental Negotiating Committee
IPCC	Intergovernmental Panel on Climate Change
ISO	International Standards Organization
JANIC	Japanese NGO Center for International Cooperation
JATAN	Japan Tropical Action Network
JFGA	Japan Flon Gas Association
JSP	Japan Socialist Party
JUSCANSZ	Japan, United States, Canada, Switzerland
kg	kilograms
km	kilometer
kWh	kilowatt hours
LDP	Liberal Democratic Party
LRTAP	Long Range Transboundary Air Pollution
MAFF	Ministry of Agriculture, Forests, and Fisheries (Japan)
METI	Ministry of Economy, Trade, and Industry (Japan)
MITI	Ministry of International Trade and Industry (Japan)
MoC	Ministry of Construction (Japan)
MoFA	Ministry of Foreign Affairs (Japan)
MoHW	Ministry of Health and Welfare (Japan)
MoT	Ministry of Transportation (Japan)
Mt C	million tons carbon
MW	Megawatts
NASA	National Aeronautics and Space Administration
NCS	Nature Conservation Society
NEPA	National Environmental Policy Act
NGOs	non-governmental organizations
NIMBY	Not-In-My-Back-Yard
NO_x	nitrogen oxide
NPO	Non-Profit Organization
NRDC	Natural Resources Defense Council
NWF	National Wildlife Federation
ODA	official development assistance

OECD	Organization for Economic Cooperation and Development
OMB	Office of Management and Budget
OPEC	Organization of the Petroleum Exporting Countries
ppm	parts per million
RITE	Research Institute of Innovative Technologies for the Earth
SEA	Single European Act
SO_x	sulfur oxide
SO_2	sulfur dioxide
SPD	Social Democratic Party
SST	supersonic transport
TNC	The Nature Conservancy
UK	United Kingdom
UN	United Nations
UNCED	United Nations Conference on Environment and Development
UNEP	United Nations Environment Programme
US	United States
USD	United States dollars
WCED	World Commission on Environment and Development
WMO	World Meteorological Organization
WRI	World Resources Institute
WWF	World Wildlife Fund; Worldwide Fund for Nature

1 Introduction

As regional leaders and the world's largest economies, the US, Japan, and Germany[1] are particularly important players influencing the global environment and the direction of international environmental protection efforts. Yet, they are pursuing environmental protection with different levels of enthusiasm and with different policy tools. This book asks why differences in approaches to environmental management emerged in Germany, Japan, and the US and finds at least a partial answer in the development of quite different environmental communities and policy-making rules and procedures (both formal and informal) in the three countries.

At the turn of the twenty-first century, these three countries alone accounted for roughly half (49.63 percent) of the global Gross National Product (GNP).[2] As a result, these nations will both directly and indirectly affect the future sustainability of the planet in powerful ways.

Because of their wealth and the relatively large size of their populations, the US, Japan, and Germany are major consumers of natural resources and producers of waste (see Table 1.1). There are 80 cars in the US, 54 in Germany, and 56 in Japan for every 100 inhabitants. The yearly municipal waste produced per person is huge: 720 kg (15,840 pounds) in the US, 460 kg (10,120 pounds) in Germany, and 400 kg (880 pounds) in Japan. Decades of development have taken their toll on wildlife species, especially in Germany where close to 68 percent of all known species of fish and 37 percent of all known species of mammals are threatened with extinction. In the US over 10 percent of mammal species are threatened with extinction and in Japan close to 8 percent. These countries also have an enormous impact on the larger global environment. Combined they take in close to 12 percent of global fish catches (primarily Japan and the US)

[1] This book deals primarily with the Federal Republic of Germany (FRG) and Germany post-reunification. The former German Democratic Republic (GDR) is only dealt with in passing. For purposes of simplification, the term Germany is used throughout except when specific reference to the GDR is made.

[2] Total world GNP for 1999 was US $29.2 trillion. The US share of this was 28.57 percent, Japan 13.95 percent, and Germany 7.11 percent. World Development Indicators Database, World Bank 8/2/2000.

Table 1.1 *Japan, Germany, the US: area, population, population density, and economy*

	Germany	Japan	United States
Total area (km^2)	357,000	378,000	9,364,000
Population 1999	82.2 million	126.7 million	271.3 million
Pop. density 1999 (inhabitants/km^2)	230.2	335.4	29.0
1999 Gross Domestic Product (GDP) (billions of $US at 1995 purchasing power parity)	1,842	3,005	8,681

Source: OECD, *Environmental Performance Review: Achievements in OECD Countries* (Paris: OECD, 2001), pp. 72–5.

Table 1.2 *Select environmental quality indicators*

	Germany	Japan	United States
Public waste water treatment (% pop. served)	89	55	71
Major protected areas (% total area)	26.9	6.8	21.2
% forested area	30.1	66.8	32.6
Threatened mammals %	36.7	7.7	10.5
Threatened birds %	29.2	8.3	7.2
Threatened fish (% known species)	68.2	11.1	2.4
Industrial waste kg/1,000 US$ GDP	38	49	—
Municipal waste kg/cap.	460	400	720
1998 per capital distance traveled by vehicle (km/cap.)	7.3	6.1	15.7
1998 road vehicle stock	44,270,000	70,820,000	214,430,000
Vehicles/100 inhabitants	54	56	80
Tropical wood imports (USD/cap.)	2.0	18.4	1.6
Fish catches (% world)	0.3	6.3	5.4

Source: OECD, *Environmental Performance Review: Achievements in OECD Countries* (Paris: OECD, 2001), pp. 72–5.

and are major importers of tropical woods (primarily Japan) (see Table 1.2). The ecological footprint of these societies is large. If inhabitants in developing countries were all to live as well as individuals in these societies do, then it is highly questionable that the planet could survive the stress placed on its resources and the environmental damage it would cause.

At the same time, these countries are environmental leaders on several fronts. Japan, the US, and Germany are among the world's largest funders of overseas environmental protection efforts. They are respectively the first, second, and fourth largest providers of official development

Table 1.3 *Expenditures on environmental protection*

	Germany	Japan	United States
Domestic pollution control abatement (% GDP)	1.5	1.6	1.6
1999 bilateral foreign aid budget; % spent on environment	$5.515 billion; $1.65 billion (30%)	$15.323 billion; $3.83 billion (25%)	$9.145 billion; $0.96 billion (10.5%)

Source: OECD, *Environmental Performance Review: Achievements in OECD Countries* (Paris: OECD, 2001), pp. 72–5; OECD, www.oecd.org/dac/htm/dacstats.htm#Dactables; Japanese Ministry of Foreign Affairs; World Wildlife Fund.

assistance (ODA) in the world (France is the third). Between 10 and 30 percent of this amount is targeted at environmental initiatives (Table 1.3). Japan, Germany, and the US also dominate in the purchase and production of environmental technologies and services. They accounted for 74 percent of an estimated $185 billion world market of environmental technologies and services at the beginning of the 1990s (US, $80 billion; Japan, $30 billion; Germany, $27 billion). They similarly were among the largest markets for environmental equipment and services with the US accounting for 40 percent, Germany 9 percent, and Japan 12 percent of world sales of $200 billion.[3] Because of their extensive environmental regulations, research capacities, and technological know-how, they are often looked to by other states for technical and financial assistance, programatic ideas, and policy examples.

Germany accounts for close to one third of the European Union (EU)'s economy, meaning that it has considerable influence on EU environmental decisions as well as the decisions of possible accession states in central and eastern Europe. Japan too affects environmental conditions more widely, but especially in Asia, where its trade and investment activities are heavily concentrated. The US impact is the most widespread globally because of its unique role as an economic and military super power.

Another way these three states influence the environment that has not been given sufficient attention in the environmental policy-making literature is through the way environmental policies are incorporated into the socio-economic models they present to the world. Many developing

[3] Organization for Economic Cooperation and Development (OECD), "The OECD Environment Industry: Situation, Prospects and Government Policy," Paris: OECD 1992. OCDE/GD (92) 1.

countries model aspects of their own economies on the Japanese, German, and US models. Thus, the extent to which their own socio-economic models are "greened" could influence environmental outcomes elsewhere in the world as well.

A neo-liberal economic paradigm motivates US trade policy and is increasingly starting to influence US environmental policy. Not only must US environmental groups work in a system where they are in competition with other interest groups lobbying politicians and trying to sway public opinion, they also operate in a country where a deregulation fervor has begun to penetrate many different policy areas, including the environment. The shift is not complete nor is it embraced by all, but it is clearly happening.

In contrast, social market economics (some would say social welfare economics) influences unemployment, health, and environmental policy choices in Germany. The precautionary principle has become increasingly institutionalized. Germany has not embraced deregulation in the way the US has. Instead, taxes remain high and government regulations to tame market forces to promote social equality and environmental protection are generally accepted even though the cost of doing this is straining the government's budget and raising some concerns about international competitiveness.

In Japan, too, the state is actively engaged in the market. There has been considerable deregulation in Japan following the US example. Yet, government continues to play (or try to play) an important role in many economic areas negotiating with industry over how to address various policy concerns. This is true in the environmental realm as well. The environment is being linked to the country's concerns with energy security and foreign policy. The biggest struggle for Japan's environmental community is that it has historically been on the outside of the decision-making center. This contrasts with Germany, where there is considerable discussion between non-governmental organizations (NGOs), government, and business about policy decisions. The experiences of severe pollution in Japan in the 1960s, however, limit the ability of industry to be blatantly opposed to environmental regulations as some US industries have done with their strong opposition to the Kyoto Protocol.

Environmental movements

Three main sets of questions are addressed in this book. The first has to do with why environmental movements became institutionalized in such very different ways in Japan, Germany, and the US, and why the movements'

goals and strategies have changed over time.[4] The differences among the three countries in how their environmental movements developed are striking. Germany has a Green Party, which, at the time of writing, is in a coalition government. The US has a large community of environmental NGOs that lobby out of Washington, DC. Japan, in contrast, has only a very small and weak community of environmental groups.

As is discussed in much more detail throughout this book, in Japan, environmental citizens' movements were critical to pushing environmental matters on to the governmental agenda in the 1960s and early 1970s. There was only a small handful of officials in the bureaucracy with a knowledge of, or interest in, environmental matters. Over time, however, the influence of environmental citizens' movements waned and environmental policy making became increasingly centered within the bureaucracy.[5] For several decades now, the bureaucracy has been at the center of environmental decision making.[6] Historically, jurisdictional divisions have been sharp among the ministries.

There are some signs of change. Prior to the governmental reform of 2001, which in a process of consolidation reduced the number of Japanese ministries and agencies from twenty-two to thirteen, the Environment Agency, the Ministry of International Trade and Industry (MITI), the Ministry of Finance, the Ministry of Foreign Affairs (MoFA), the Ministry of Agriculture, Forests, and Fisheries (MAFF), the Ministry of Transportation (MoT), and the Ministry of Construction (MoC) were the main ministries and agencies dealing with environmental regulation. For the period covered by this book, these bureaucratic entities were still in place and thus will be referred to throughout most of the text. It is important to note that with Japan's government restructuring, there was only one new ministry created: the Environment Ministry. This is just one indication that the environment is becoming a more important policy area in Japan.

[4] For the European and US contexts see Dieter Rucht, "The Impact of National Contexts on Social Movement Structures: A Cross-Movement and Cross-National Comparison," and Hanspeter Kriesi, "The Organizational Structure of New Social Movements in a Political Context," in Doug McAdam, John D. McCarthy, and Mayer N. Zald (eds.), *Comparative Perspectives on Social Movements: Political Opportunities, Mobilizing Structures, and Cultural Frames* (Cambridge: Cambridge University Press, 1986), pp. 152–84 and 185–204.

[5] For this line of argument see Michio Muramatsu and Ellis Krauss, "The Conservative Policy Line and the Development of Patterned Pluralism," in Kozo Yamamura and Yasukichi Yasuba (eds.), *The Political Economy of Japan, Vol. 1: The Domestic Transformation* (Stanford, CA: Stanford University Press, 1987), pp. 516–54; and John C. Campbell, "Bureaucratic Primacy: Japanese Policy Communities in American Perspective," *Governance: An International Journal of Policy and Administration* 2 (1989), 5–22.

[6] See Campbell, "Bureaucratic Primacy."

Japan's politicians have not been known as champions of green issues although this started to change in the 1990s. There are now numerous "green" politicians in the Diet across the many political parties. There is no one political party, however, that is seen as the champion of environmental issues, although the New Kômeitô may be closest in its policy orientation. Instead, politicians with an interest in environmental matters tend to become members of the environmental *zoku* (literally, a family or tribe; the term refers to a community of politicians in the Diet who share an interest in a particular issue area regardless of political party affiliation).[7]

In contrast with the situation in the US and in Germany, there are no well-known environmental think tanks, although new ones like the Institute for Global Environmental Strategies have been set up. There has also been a substantial growth in the number of environmental NGOs although the community remains small. Japanese courts are traditionally weak, but in the early 1970s played a very important role in stimulating legislative action on environmental matters.

Germany has attracted much attention because of its Green Party. The existence of the Green Party means that environmental interests have a direct voice in parliament. It also guarantees that politicians in other parties remain sensitive to environmental concerns. All the political parties in Germany portray themselves as champions of environmental interests, but they do so from different positions with the Christian Democratic Union (CDU) being more conservatively oriented than the Social Democratic Party (SPD). There is even some question as to whether or not Germany's Green Party will survive in parliament as other political parties increasingly take up its issues.

There also are strong local, federal, and international environmental groups, such as Greenpeace, the Bund für Naturschutz Deutschland (BUND), and the Bundesverband Bürgerinitiativen Umwelt (BBU), all of which boast large memberships. Several academic centers and think tanks like the Wuppertal Institute for Climate Research, Öko Institut, and the Max Plank Institutes also play critical roles in influencing environmental debates. The Federal Ministry for Environment, Nature Protection, and Reactor Safety (henceforth, Ministry for Environment) by no means dominates the German bureaucracy, but it is strong compared with its Japanese counterpart, as suggested by the fact that it was elevated to ministerial status already in 1986. The federal Environment Agency (Umwelt Bundesamt), first set up in 1974, was not dissolved when the

[7] Takashi Inoguchi and Tomoaki Iwai, *"Zoku giin" no Kenkyû* (Tokyo: Nihon Keizai Shimbunsha, 1987).

new ministry was created. Instead, it continues to play an important role in environmental research and in providing scientific and technical input into legislation. Other important environmental actors within the administration include the Federal Ministry of Consumer Protection, Food, and Agriculture; the Federal Ministry of Economics and Technology (henceforth Ministry of Economics) the Federal Ministry of Finance; the Federal Ministry of Transport, Construction, and Housing (henceforth Ministry of Transport); the Federal Ministry of Education and Research; and the Federal Ministry of the Interior.

In comparison with the situation in Japan, where the central government is quite strong in relation to prefectural and local governments, in Germany, the Länder governments also have much say over the shape of environmental policies. Also, in comparison with the bureaucracy-centered environmental policy community in Japan, in Germany, the environmental policy community is more pluralistic and political parties play a more prominent role in the agenda-setting process. German courts are very strong and have had a strong influence over the direction of German environmental legislation.

In taking Germany as a case, it is essential also to recognize the influence of the EU in environmental policy making. In response to efforts to harmonize environmental laws and standards across the EU, increasingly it is in Brussels where environmental policy making occurs. The 1986 Single European Act (SEA) explicitly included the environment as an area of EU competence and changed the rules for introducing EU laws from an absolute to a qualified majority system, essentially easing the process of introducing EU laws. While states still have the possibility to opt out of environmental directives that conflict with existing more stringent national laws, this requires that a member state be proactive and that it prove that existing legislation is not there as a trade barrier. Within the EU, Germany is typically, although by no means always, among the more proactive states on environmental matters, and often seeks to have its stricter environmental programs and philosophies adopted by the community as a whole. A benefit that can come from being proactive in domestic policy design is that a state can set the base line for international standards that may follow. This may be a reason for Germany's proactive role within the EU.[8]

Early chapters of this book deal almost exclusively with decision-making processes within Germany. As the importance of the European Community (EC) and subsequently the EU expands with time, the book

[8] Adrienne Héritier, Christoph Knill, Susanne Mingers, and Martina Beckka, *Die Veränderung von Staatlichkeit in Europa* (Opladen: Leske and Budrich, 1994).

includes more discussion of the EC and EU, exploring how Germany has worked to influence EC environmental directives and regulations and also has been restricted by the need to negotiate with other EU member states.

The US environmental community is highly pluralistic with many points of entry into the decision-making process. The White House and the executive branch, Congress, the states, large environmental groups, think tanks, and the scientific communities are all actively involved in influencing environmental policy outcome. Neither the Democratic nor the Republican Party portrays itself as the party of environmental interests, but of the two, the Democratic Party is typically more supportive of environmental regulations. Of the three countries, the US environmental policy community is the largest and most pluralistic, but divided government and the power of economic interest groups at times has made it difficult for the environmental policy community to gain political support for its agenda.

Survey results reveal some interesting information regarding the influence of various actors on the climate change debate in the US during the latter part of the Clinton administration. Congress and the White House were considered to be, on average, very influential. The US Environmental Protection Agency (EPA), the EPA administrator, and the EPA offices of Policy, Planning, and Evaluation, Air and Radiation, and Atmospheric Programs were all ranked as very important. The Department of Energy, the State Department, and in particular, the State Department's Office of Global Affairs, also were perceived as being highly influential policy actors. Outside of government, the Intergovernmental Panel on Climate Change (IPCC) was seen as an important player as were the print and electronic media. Also, several environmental organizations and economic interest groups were viewed as being very important. The environmental NGOs to receive the highest rankings were Environmental Defense (EDF), the Natural Resources Defense Council (NRDC), and the World Resources Institute (WRI). The Global Climate Coalition (GCC) was considered a particularly important representative of industrial interests. The survey results suggest the existence of a diverse community attempting to influence the direction of US climate change policy.[9]

[9] The survey is part of a larger international survey research project called the Global Environmental Policy Network Survey that was conducted in the US, Japan, Germany, and Korea under the leadership of Yutaka Tsujinaka. Fumiaki Kubo conducted the content analysis of climate change articles appearing in the *Washington Post*, the *New York Times*, *Inside EPA*, *Outlook*, and *Inside Congress* for 1997. Tsujinaka and Kubo then had the entire list of 292 actors identified by this content analysis reviewed by eight individuals identified as experts in the field. This expert review committee scored actors on their influence level. The 180 highest scoring actors were then targeted for interviews; 60 were

What explains these very divergent developments in the environmental movements of these countries? Do the differences have to do with the severity of pollution problems, public perceptions, cultural factors, or institutional differences?

A common assumption in much of the writing in environmental politics and on social movements in general is that the stronger the environmental movement in a country, the stronger environmental regulations are likely to be. Thus, we often hear that the reason that Germany is so environmentally oriented is because of its Green Party and why Japan continues to engage in whaling and tropical deforestation is because of the weakness of its environmental movement. Yet, we know that having a strong environmental community does not always equate to strong environmental programs. Despite Japan's relatively weak environmental movement, Japan has accepted the Kyoto Protocol addressing climate change. In contrast, the relatively strong environmental movement in the US was not able to persuade the George W. Bush administration to support the Kyoto Protocol.

In comparing environmental policy making in Japan, Germany, and the US across several environmental issues, I seek to bring a more nuanced understanding to how environmental communities influence the policy process. I also try to shed light on how changes in the relationships among environmental, business, and governmental actors over time can alter how environmental problems are understood and how policy making is approached.

Environmental policy approaches

The second set of questions addressed in this book asks in what ways differences in the make-up of environmental communities and their relationship to actors in the larger political and economic systems matters for environmental policy change and environmental management styles in Japan, Germany, and the US in relation to both domestic and international environmental problems.[10]

One of the best examples of differences in policy approaches among the three countries can be found in their response to climate change. The rocky international negotiations trying to work out a framework for the

interviewed by Anja Kurki, Tadashi Okimura, and myself. Results of the survey appear in Anja Kurki, Miranda Schreurs, Yutaka Tsujinaka, and Fumiaki Kubo, "Beikoku ni okeru Kikô Hendô Seisaku: Beikoku Oyobi Nikkan no Chikyû Kankyô Seisaku Netto Waaku Chôsa kara no Dôsatsu," *Leviathan* 27 (2000), 49–72.

[10] A similar type of question is asked by David Vogel, *National Styles of Regulation: Environmental Policy in Great Britain and the United States* (Ithaca, NY: Cornell University Press, 1986).

Kyoto Protocol, an international agreement requiring the advanced industrialized states to reduce their greenhouse gas emissions, bogged down repeatedly because of policy differences among the industrialized states.

Particularly the differences between the US, on the one hand, and the EU, on the other, made formulating an agreement difficult. Germany, both independently and as a member of the EU, has been an active advocate of immediate international action on climate change by the advanced industrialized states. Germany, the largest greenhouse gas emitter within the EU responsible for about one third of EU emissions, pushed hard within the EU and internationally for an international agreement that would require the developed world to take action domestically to reduce their own sources of greenhouse gases and set an ambitious target for its own emissions reductions. Japan similarly went into the negotiations with a domestic reduction target although it expressed concerns about whether in the short term large reduction goals could really be achieved. They were also concerned about the US position. While the US under the William Clinton administration agreed at the negotiations to a substantial emissions reduction target, there was strong opposition in the US Senate to the agreement on the grounds that it was unfair to the US economy.

Differences between the US and the EU/Japan widened with the shift in administration in the US. Shortly after assuming office, in March 2001, the George W. Bush administration announced that it was "unequivocally" opposed to the Kyoto Protocol. Japan, Germany, and the EU reacted with strong words and diplomatic efforts to convince the Bush administration to reconsider. When their efforts failed, the EU and Japan came to an agreement in June 2001 to move forward with the Kyoto Protocol's ratification even without the US.

The differences voiced in the climate change negotiations speak to larger differences that have developed among these countries in terms of the roles they feel that government and markets should play in environmental protection and where responsibility for taking action lies. They further reflect differences in the relationships that have emerged among governments, business, and environmental NGOs in the policy-making process. Finally, we see a different level of interest in working at the multilateral level for environmental protection emerging across the three countries.

The US was among the first countries in the world to introduce pollution control regulations in the 1960s and 1970s. Initially, there was a heavy reliance upon regulatory measures to control pollution. Regulations included emissions standards controlling point sources, ambient standards, and technology standards. Since the early 1980s, however,

along with the broader effort to reduce the role of the government in the private sector, there has been a shift in the US away from the heavy use of regulation. Far more than is true in Germany or Japan, proponents of cost-benefit analysis, voluntary action by industries, and market-based mechanisms (e.g. emissions trading, joint implementation, and the clean development mechanism) for environmental protection are gaining ground. Both Japan and Germany have shown some interest in the use of market mechanisms to address environmental problems, but both continue to believe that government through the establishment of regulations must play a stronger role.

In Germany, where there is a social market economy, citizens expect government to play an interventionist role and to redistribute wealth. They also believe that the government must regulate to protect the environment. Of course, this is also true in the US, but there is a difference in emphasis. The German political parties are all far more supportive of regulatory measures to address climate change than appears to be the case in the US. Like in the US, industry is eager to avoid regulation, but it works more closely with government in finding solutions to environmental problems in a form of consultative decision making. German industry has also been the most willing of the three to accept taxes on polluters (also a market mechanism) to reduce pollution levels although not to the same degree as is true in some of Germany's smaller neighbors to the north.

One might argue that, of the three countries, Germany is the one that has gone farthest towards embracing not only environmental protection policies, but policies that seek to shift economic development in directions that are environmentally more sustainable.[11] The Red-Green government that has been in power in Germany since 1998 has experimented with introducing environmental taxes in an effort to shift the German economy in the direction that will reduce the size of the German ecological footprint, making the entire structure of the economy more sustainable. This is not to argue that Germany has really embraced the kinds of deep structural changes to the economy necessary to produce a socio-economic system that could be considered truly sustainable. Still, it has taken some ambitious initial steps in this direction.

In Japan, there is a tradition of close governmental consultation with, and some would argue, administrative guidance of industry (*gyôsei shidô*), but a weaker social market tradition than is found in Germany. Japan's powerful ministries are not eager to give up their regulatory power. They

[11] OECD, *Environmental Performance Review: Germany* (Paris: OECD, 2001).

continue to use administrative guidance in their efforts to alter industrial behavior. They have not embraced market-based approaches with the same enthusiasm as has been seen in the US (although this appears to be changing) and do not accept pollution taxes as readily as the Germans. Japan continues to rely heavily on regulations, but of a Japanese form. In Japan regulations are often initially quite vague in terms of specifics; they can be thought of as guidelines established to alter industrial behavior. Voluntary agreements are also commonplace. Once behavioral change has been achieved to at least some degree, then more stringent regulations are adopted. Japan falls in between the US and Germany in its approach to environmental protection. It has traditionally looked to the US for environmental policy ideas. Increasingly, it is looking now towards Germany and is arguing that the US could learn from Japan's successes in energy efficiency improvements.

Nuclear energy provides another interesting and important example of the different orientations that have emerged in the environmental and energy policies of Japan, Germany, and the US. All three countries are dependent on nuclear energy for producing between one fifth to one third of their electricity. Yet, the future of nuclear energy looks quite different in the three states. After the SPD and the Green Party formed a coalition in 1998, Germany announced its plans to phase out nuclear energy. In June 2000, the government and the nuclear industry agreed to phase out all existing plants over their operating life times, with the last plants being decommissioned in 2032.[12]

The US continues with its nuclear energy program although after the Three Mile Island nuclear accident, new construction of plants was brought to a halt. In contrast with Germany, however, in the US, there have been efforts in recent years to relicense existing plants, such as the Calvert Cliffs Nuclear Power Plant in Maryland. After the energy crisis in California in the summer of 2001 caused concerns about energy supply, there were some calls for a new look at nuclear energy. The energy policy plan announced by Vice President Richard Cheney in May 2001 called for increased development of fossil fuel supplies and a renewed look at nuclear energy. While the report engendered considerable critique, it indicates a strong interest in nuclear energy. Several Democratic Senators, including New Mexico Senator Jeffrey Binghaman, Chair of the Senate Energy Committee, have announced their support for nuclear energy development. Whether or not this is realized, especially after the September 11, 2001 terrorist attacks on New York and Washington, DC, remains

[12] Annette Piening, "Nuclear Energy in Germany," in Manfred Binder, Martin Jänicke, and Ulrich Petschow (eds.), *Green Industrial Restructuring: International Case Studies and Theoretical Considerations* (Berlin: Springer Verlag, 2001), 403–34.

highly uncertain. Still, there is no call to phase out nuclear energy, as is the case in Germany.

Of the three, Japan has most actively promoted nuclear energy primarily because it is the most energy poor. The Japanese Ministry of International Trade and Industry (MITI), which became the Ministry of Economy, Trade, and Industry (METI) in January 2001, has been promoting the expansion of nuclear energy production to help meet growing energy demands, to reduce dependence on imported energy, and to address climate change. While this policy is being reconsidered by METI as a result of the fatal Tôkaimura uranium reprocessing plant accident of 1999, Japan is far from phasing out nuclear energy as an option. In February 2001, Tokyo Electric Power Company announced that it was canceling all new plant construction because of a smaller growth in energy demand than had been expected. Only plans for the building of four nuclear power plants were to be maintained.[13]

Differences among these countries are also evident in how they addressed acid rain. In the US, acid rain was dealt with through reliance on emissions trading among polluting utilities. Regulatory measures had been demanded by environmental groups for close to a decade beginning in the early 1980s, but due to opposition from utility plants, no policy action was possible. It took the development of a new policy approach based on market mechanisms to get the government to act to address acid rain. The George H. W. Bush administration employed an emissions trading system for sulfur oxides in the 1990 amendments to the US Clean Air Act. In Germany, in contrast, regulation has been the dominant approach used to control acid rain producing particulates. Industrial opposition to regulations melted under strong public opinion and the rise of a Green Party. In Japan, a mix of regulation, tax incentives, and voluntary compliance have dominated in the control of domestic air pollutants. For Japan, acid rain is far more of an international problem stemming from China. Thus, there has also been a strong effort to aid China in dealing with acid rain.

While none of the three countries can boast to the rest of the world that they are models of sustainable development, since the 1990s, Germany has taken the boldest steps of the three in this direction with its eco taxes, the use of legislation to reduce waste at its source, mandatory recycling by manufacturers, its ambitious greenhouse gas emissions reduction target, and its active introduction of renewable energy sources. Germany also played a pivotal role in the EU's decision to ratify the Kyoto Protocol. It is important to note, however, that there are exceptions and Germany is

[13] *Daily Yomiuri*, February 10, 2001, p. 12.

criticized both by its own environmental community and sometimes by external actors for not doing enough. Germany, for example, has on a number of instances been found at fault by the European Community for agricultural and land use policies that are environmentally destructive or threaten migratory birds. Germany also blocked EU efforts to introduce regulations regarding the recycling of automobiles.

Japan has been most successful of the three in the areas of energy efficiency improvements and in some kinds of air pollution control (a noticeable exception is dioxins). It is also making strides in promoting recycling and has become a major international funder of environmental protection initiatives in the developing world, especially in Asia. Japan's international environmental image, however, remains somewhat clouded because of the role it has played in tropical deforestation, ocean fishing, and whaling.

In the US, there is much discussion about the importance of nature conservation and wildlife preservation. The US also has been a leader in the control of toxic chemicals and pioneered many of the air and water pollution regulations now found widely throughout the industrialized countries. Nevertheless, US environmental policy is arguably less influenced by sustainable development concerns than is the case in Germany or Japan.[14] In contrast with Japan and Germany, there has been only very limited interest in the US in promoting public transportation, reducing the level of consumption, or in introducing domestic political measures to reduce energy consumption.

Given that the US heavily influenced the early environmental laws and regulations of both Japan and Germany, why at the turn of the twenty-first century do their approaches to environmental protection vary as much as they do?

International environmental protection and domestic institutional change

Finally, a third question addressed in this book is how changing perceptions of what is meant by environmental protection and participation in international environmental policy-making processes has contributed to changes in the strategies and goals of domestic political actors and even altered policy-making institutions. This question looks at the impact of new more international or global ways of thinking about an issue that in

[14] Gary C. Bryner, "The United States – 'Sorry – Not Our Problem,'" in William M. Lafferty and James Meadowcroft (eds.), *Implementing Sustainable Development: Strategies and Initiatives in High Consumption Societies* (Oxford: Oxford University Press, 2000), pp. 273–302.

the past was primarily viewed as a national matter on domestic actors and institutions.

It also examines how actors within a system may look to the outside to try to find support for their ideas and possibilities for strengthening their position within the domestic political context. This is in line with the increasing attention being given in the field of political science to the ways in which international and domestic politics are linked.[15]

The comparison in this book has both a longitudinal and a horizontal component to it. Comparisons across countries are often done focusing on specific periods in time. The problem with this approach is that it treats the social, political, and economic contexts of a nation as being static. There has been much change within Japan, Germany, and the US in the relationships among state, industry, and society in the environmental realm, especially as environmental degradation and resource consumption is increasingly recognized to be a matter of global concern. Changes in actors and institutions are altering how environmental policy is being made and this has important implications for the future direction of environmental protection initiatives in these three countries.

Comparing environmental politics in Japan, Germany, and the US

This book is not the first to focus attention on these three countries' environmental policies. Others have been intrigued by the comparison as well. David Vogel, for example, compared Japanese and German environmental policy in an effort to understand why Japan and Germany switched positions in terms of the intensity of their environmental movements between the 1970s and the 1980s. Vogel argues that, because of shifts in public opinion, the movement was more intense in Japan than Germany in the 1970s and in Germany than Japan in the 1980s.[16] Helmut Weidner has written extensively on both Japanese and German environmental

[15] See Robert Putnam, "Diplomacy and Domestic Politics: The Logic of Two-Level Games," *International Organization* 42 (1988) 427–60; Peter Evans, Harold Jacobson, and Robert Putnam (eds.), *Double Edged Diplomacy: International Bargaining and Domestic Politics* (Berkeley: University of California Press, 1993); Thomas Risse-Kappan (ed.), *Bringing Transnational Relations Back In: Non-State Actors, Domestic Structures, and International Institutions* (New York: Cambridge University Press, 1995); Miranda A. Schreurs and Elizabeth Economy (eds.), *The Internationalization of Environmental Protection* (Cambridge: Cambridge University Press, 1997); Robert Keohane and Helen V. Milner, *Internationalization and Domestic Politics* (Cambridge: Cambridge University Press, 1996).

[16] David Vogel, "Environmental Policy in Japan and West Germany," paper prepared for presentation at the annual meeting of the Western Political Science Association, Newport Beach, CA, March 1990.

policy. His work focuses on air pollution policy formation in the 1970s and 1980s and is concerned with differences in the substance and implementation of air pollution laws. He argues that Japan out-performed Germany in air pollution control during this period because the Japanese government established an elaborate air pollution monitoring system that helped to keep citizens informed and provided incentives for industry to invest in pollution control. In Germany, in contrast, he argues there was an "implementation deficit," that is, that policy objectives were not obtained because of difficulties with implementation. He suggests, however, that the election of the Green Party to the German parliament in 1983 led to changes in Germany that pressured the government and industry to take pollution control more seriously.[17] Gesine Foljanty-Jost also has brought attention to the different ecological strategies of Germany and Japan in an edited volume examining the role of the state and industry in environmental protection.[18] Alan Miller and Curtis Moore have compared government and industry initiatives in environmental technology research and development in Japan, Germany, and the US. They argue that the US is falling behind Japan and Germany, which have both used strict environmental regulations to spur technological innovation.[19]

These works focus primarily on the domestic environmental politics of these countries. In contrast, this book examines how environmental policy making has developed over time in Japan, Germany, and the US, as the countries have gone from addressing domestic to regional and global environmental issues. It examines the dynamic relationships that exist in these countries among actors, interests, institutions, and ideas, exploring why the environmental policy approaches of these states diverged in such a way that the three could not come to agreement over how to address climate change, one of the world's most important environmental problems.[20]

[17] His many writings on Japanese and German environmental politics include *Air Pollution Control Strategies and Policies in the Federal Republic of Germany: Laws, Regulations, Implementation, and Shortcomings* (Berlin: Edition Sigma Bohn, 1986); *Basiselemente einer erfolgreichen Umweltpolitik: Eine Analyse und Evaluation der Instrumente der japanischen Umweltpolitik* (Berlin: Edition Sigma, 1996); "Globale Umweltherausforderungen," in Hanns W. Maull (ed.), *Japan und Europa: Getrennte Welten?* (Frankfurt: Campus Verlag, 1993), pp. 436–58.

[18] Gesine Foljanty-Jost (ed.), *Ökologische Strategien Deutschland/Japan: Umweltverträgliches Wirtschaften im Vergleich* (Opladen: Leske und Budrich, 1996), and Gesine Foljanty-Jost, "Kankyô Seisaku no Seikô Jôken," *Leviathan* 27 (2000), 35–48.

[19] Alan Miller and Curtis Moore, *Green Gold: Japan, Germany, the United States, and the Race for Environmental Technology* (Boston: Beacon Press, 1994).

[20] See also Miranda A. Schreurs, "Domestic Institutions and International Environmental Agendas in Japan and Germany," in Schreurs and Economy (eds.), *The Internationalization of Environmental Protection*, pp. 134–61.

Environmental policy approaches

Forces of convergence and divergence

While there are powerful domestic political and economic factors that have led Japan, Germany, and the US to develop different approaches to environmental protection, it is important to realize that there are also some powerful forces of convergence. These convergence factors help explain the similarity in the timing of some environmental policy changes and institutional developments in the three countries as well as their cooperation on some international environmental agreements.

Modern telecommunications and active international exchange and cooperation have helped rapidly to spread news about pollution problems, resource concerns, and destruction of natural areas among them. Environmental crises and scientific discoveries have helped to raise public consciousness across their political boundaries. Scientific confirmation in the mid-1980s that there was large-scale depletion of stratospheric ozone, for example, propelled forward the establishment of the Montreal Protocol on Substances that Deplete the Ozone Layer.

Cross-societal learning also influences environmental policy change.[21] Policy makers, industries, and NGOs in these three countries have looked to each other for policy ideas.[22] Both Japan and Germany looked to the US in the 1970s in formulating their own environmental laws. In the 1990s, Japan continued to look towards the US, but also increasingly towards Germany for environmental policy ideas. An example of this were the efforts in 2000 by an umbrella group of activists, researchers, and energy specialists called Green Energy Law Network in Japan who worked together with an alliance of over 240 politicians to try to pass a renewable

[21] See Peter Hall, "Policy Paradigms, Social Learning and the State: The Case of Economic Policymaking in Britain," *Comparative Politics* 25 (1993), 275–96; Paul A. Sabatier, "Policy Change Over a Decade or More," in Paul A. Sabatier and H. C. Jenkins-Smith, *Policy Change and Learning: An Advocacy Coalition Approach* (Boulder: Westview Press, 1993), pp. 13–40; William C. Clark, Jill Jäger, Josee van Eijndhoven, and Nancy M. Dickson (eds.), Social Learning Group, *Learning to Manage Global Environmental Risks*, vol. I: *A Comparative History of Social Responses to Climate Change, Ozone Depletion, and Acid Rain*, and vol. II: *A Functional Analysis of Social Responses to Climate Change, Ozone Depletion, and Acid Rain* (Cambridge, MA: MIT Press, 2001); and Martin Jänicke and Helmut Weidner (eds.), *National Environmental Policies: A Comparative Study of Capacity-Building* (Berlin: Springer Verlag, 1997); Ronnie Lipschutz, *Global Civil Society and Global Environmental Governance: The Politics of Nature from Place to Planet* (Albany: SUNY Press, 1996).

[22] Jack L. Walker, "The Diffusion of Innovations among the American States," *American Political Science Review* 63 (1979), 880–99; and Jack L. Walker, "Setting the Agenda in the U.S. Senate: A Theory of Problem Selection," *British Journal of Political Science* 7 (1977), 423–45.

energy promotion law that was modeled on a German law.[23] In the 1980s, Germany was trying to learn from Japanese successes in dealing with sulfur oxide (SO_x) emissions.

The US tends to be somewhat more reluctant than Japan or Germany to "learn" from other countries' examples. Yet, in the US case as well, we see adoption of some ideas coming from Japan and Germany, such as the use of voluntary environmental agreements with industry to address climate change. There have been active efforts among these three countries to share information about mutual policy priorities and environmental concerns.

At times, domestic policy actors also have actively tried to transmit foreign experiences to their own policy leaders in an effort to influence policy change domestically.[24] A good example of this have been the efforts by Japan's NGOs to push for the introduction of legislation allowing contributions to non-profit organizations to be deducted from taxable income as is done in the US. There also have been times that actors in one state or at the international level actively have tried to intervene in another state's domestic policy-making processes. For example, US manufacturers of ozone depleting chlorofluorocarbons (CFCs), working together with environmentalists, pushed US politicians to pressure other countries, including Japan and Germany, to join the US in establishing regulations on CFCs so that there would be a level playing field.[25]

Furthermore, over time, there has been a growth in the number of political actors that operate across these countries.[26] The Climate Action Network, a network of environmental groups working on climate change, helps groups exchange information and coordinate strategies to influence the international climate change negotiations. International NGOs may also establish boycotts of certain products in an effort to influence the policy behavior of multinational corporations or states. Nor are efforts to influence policy at the international level through transnational activism

[23] Discussion with Tetsunari Iida, Chairman of Green Energy Network, February 3, 2001.

[24] Hugh Heclo, *Modern Social Politics in Britain and Sweden* (New Haven: Yale University Press, 1974), pp. 10–11.

[25] See Elizabeth DeSombre, *Domestic Sources of International Environmental Policy* (Cambridge: MIT Press, 2000); and Joanne Kauffman, "Domestic and International Linkages in Global Environmental Politics: A Case-Study of the Montreal Protocol," in Schreurs and Economy (eds.), *The Internationalization of Environmental Protection*, pp. 74–96.

[26] See James N. Rosenau, *Turbulence in World Politics* (Princeton: Princeton University Press, 1990); Thomas Princen and Matthias Finger, *Environmental NGOs in World Politics: Linking the Local and the Global* (New York: Routledge, 1994); Lipschutz, *Global Civil Society and Global Environmental Governance*; Paul Wapner, *Environmental Activism and World Civic Politics* (Albany: SUNY Press, 1996); Ken Conca and Ronnie Lipschutz (eds.), *The State and Social Power in Global Environmental Politics* (New York: Columbia University Press, 1993); and Margaret Keck and Kathryn Sikkink, *Activists Beyond Borders* (Ithaca: Cornell University Press, 1998).

limited to the environmental activists. Multinational corporations have pushed for the introduction of similar standards across the industrialized countries to reduce their costs of doing business.[27] There is also a network of parliamentarians known as Global Legislators Organization for a Balanced Environment (GLOBE) International that works internationally to promote environmental awareness among parliamentarians in Japan, the EU, and the US.

Very important to policy developments in Japan, Germany, and the US have been the activities of international scientific and expert communities, or what are often called "epistemic communities," that not only work to improve basic scientific understanding of issues, but also to get national governments to pay attention to their research concerns.[28] International epistemic communities frequently try to influence the policy positions of policy makers on international environmental matters.[29] The IPCC, for example, has played a critical role in winning broad international recognition of the threat posed by a warming of the earth's atmosphere as a result of the burning of fossil fuels, deforestation, and other human activities.[30]

International trading regimes also push states to establish similar environmental standards. Within the EU, this has led to a ceding of sovereignty in many environmental areas to the larger community. Internationally, the World Trade Organization is increasingly pushing states towards common trade policies, some would argue at the cost of environmental protection.

There are certainly many different avenues by which new ideas about policy problems and policy solutions have been introduced into national political debates in Japan, Germany, and the US. The forces pushing states in similar directions in terms of their policy choices are often very strong and appear to be becoming increasingly so. Indeed, there are many similarities in their laws, institutional structures, and environmental policy successes and failures.

Given the many pressures pushing countries of the same economic level in the direction of common environmental policy change, however, it is

[27] See for example, Jonathan A. Fox and L. David Brown (eds.), *The Struggle for Accountability: The World Bank, NGOs, and Grassroots Movements* (Cambridge: MIT Press, 1998).

[28] Lynton K. Caldwell, *Between Two Worlds: Science, the Environmental Movement and Policy Choice* (Cambridge: Cambridge University Press, 1990).

[29] Peter Haas, *Saving the Mediterranean: The Politics of International Environmental Cooperation* (New York: Columbia University Press, 1990); and Peter Haas (ed.), *Knowledge, Power and International Coordination*, special edition *International Organization* 46 (1992).

[30] Peter Haas and David McCabe, "Amplifiers or Dampers: International Institutions in the Management of Global Environmental Risks," in Clark et al. (eds.), *Learning to Manage Global Environmental Risks*, I, pp. 323–48.

quite striking how many important differences still remain among them in their approaches to environmental management. This book examines both instances of convergence and divergence across the three countries but is particularly interested in the reasons for the differences in their environmental policy approaches.

Environmental movements and environmental policy communities

Before continuing a few definitions are in order. This book refers to both environmental movements and environmental policy communities (alternatively, environmental policy networks). The study of environmental movements draws upon theoretical insights from the social movement literature. Sidney Tarrow's much used definition of social movements defines them as "*collective challenges, based on common purposes and social solidarities, in sustained interaction with elites, opponents, and authorities.*"[31] In the environmental realm, the focus of attention is on collectivities of individuals or groups that are organized by common purpose and attempt to alter the policies or programs of industries, governments, or society that are believed to be harming human health or the environment through their actions or non-actions.

Typically, social movement organizations are treated as distinct from interest groups and political parties.[32] Yet, as Dieter Rucht suggests, it is often difficult to distinguish social movement organizations from interest groups, and in the case of the new social movements of Europe, even from political parties. The strategies or action repertoires of groups differ significantly depending on the political context in which they find themselves. Rucht proposes three different models of social movement organizations. Social movements may be primarily organized at the grass roots level, in sub-national or national organizations that resemble traditional interest groups, or in the form of parties.[33] These different forms of organization are found respectively in Japan, the US, and Germany in their environmental movements. In Japan, most environmental groups are still working at the grass roots level although there are some national groups as well. In the US, there are both many grass roots and many national environmental groups. In Germany, there are local and national groups and a Green Party.

[31] Sidney Tarrow, *Power in Movement: Social Movements, Collective Action and Mass Politics in the Modern State* (Cambridge: Cambridge University Press, 1994), p. 4.
[32] Tarrow, *Power in Movement*, p. 5.
[33] Rucht, "The Impact of National Contexts on Social Movement Structures," pp. 188–9.