

The international sources of policy convergence: explaining the spread of environmental policy innovations

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ABSTRACT How do international processes, actors and institutions contribute to domestic policy change and cross-national policy convergence? Scholars in the fields of international relations and comparative politics have identified a wide array of convergence mechanisms operating at the international or transnational level. In order to categorize this wide array of possible causes of policy convergence, we propose a typology of three broad classes of mechanisms: (1) the co-operative *harmonization* of domestic practices by means of international legal agreements or supranational law; (2) the coercive *imposition* of political practices by means of economic, political or even military threat, intervention or conditionality; and (3) the interdependent but unco-ordinated *diffusion* of practices by means of cross-national imitation, emulation or learning. We illustrate and substantiate this claim through the empirical analysis of the international spread of three different kinds of policy innovation: national environmental policy plans and sustainable development strategies, environmental ministries and agencies, and feed-in tariffs and quotas for the promotion of renewable electricity.

KEY WORDS Environmental policy; harmonization; imposition; policy convergence; policy diffusion.

INTRODUCTION

What explains the adoption of similar policy innovations, i.e. laws, policies, instruments and institutions, across different nations? An abundant and still growing body of literature mainly in comparative politics and international relations addresses this question or, more generally speaking, the puzzle of policy convergence and its sources. While this literature has generated a variety of theoretically informed hypotheses, its focus is often limited to the analysis of single mechanisms or classes of mechanisms through which policy convergence may occur and a systematic empirical illustration of how the different mechanisms of convergence actually work is still largely missing (see for state of the art Heichel *et al.* 2005; Bennett 1991b; Drezner 2001). In this article, we seek to address this gap by devising a systematic conceptualization of three

analytically distinct classes of mechanisms that contribute to policy convergence and by applying this conceptualization empirically.

Starting from the assumption that international actors, processes and institutions increasingly affect domestic policy changes, our efforts are guided by the question as to through which mechanisms they reach the domestic level and contribute to policy convergence. While this approach is not new and pertains to the long-standing debate in international relations on how international governance affects domestic policy-making, we depart from previous studies by introducing diffusion as a distinct class of convergence mechanisms which has so far been neglected in much of the more traditional comparative politics and international relations literature, but which can be shown to complement the more frequently examined mechanisms of co-operative harmonization and coercive imposition (see Bennett 1991b, for an exception). Diffusion, as we use the term, refers to processes where national policy-makers voluntarily, that is without being formally obliged by international agreements or forced by external actors, adopt a certain policy innovation and in doing so draw on policy models which have been communicated in the international system (Howlett 2000; Rogers 2003). Like Elkins and Simmons we understand diffusion as a class of mechanisms 'characterized by interdependent, but uncoordinated, decision making' where 'governments are independent in the sense that they make their own decisions without cooperation or coercion but interdependent in the sense that they factor in the choices of other governments' (Elkins and Simmons 2005: 35). While this understanding of diffusion as a process rather than an outcome differs from some of the extant literature (including some of the contributions in this special issue) (see Knill 2005), it reflects an emerging consensus among scholars of policy diffusion that more can be gained analytically from treating diffusion as a well-specified set of mechanisms of policy change than from equating it with an all-encompassing notion of spread (see, for example, Busch *et al.* 2005; Elkins and Simmons 2005; Lazer 2005; Levi-Faur 2005; Meseguer and Gilardi 2005; Tews 2005; Jørgens 2004; Simmons and Elkins 2003).

In the first part of the paper, drawing on literature from international relations and comparative political science we develop a typology of three classes of international convergence mechanisms by characterizing the differences between harmonization, imposition and diffusion. Given the abundant studies which have been written on harmonization and imposition, we shift the focus to diffusion which has so far received less attention. In the second part, we use this typology as a framework for the empirical analysis of the international spread of six environmental policy innovations. If convergence is to be conceptualized as an evolution over time (Knill 2005; Holzinger and Knill 2005), it is likely that several distinct mechanisms may have played a role at different points in time (Bennett 1991b: 230–1). Therefore, it is the aim of this article to assess whether, how and to what extent each of these three classes of mechanisms has contributed to policy convergence.

A TYPOLOGY OF CONVERGENCE MECHANISMS

Cross-national policy convergence is often explained by structural changes related to economic globalization or political internationalization. Empirical studies revealed, however, that these structural changes do not necessarily or automatically result in policy convergence (Drezner 2001 provides an overview). In other cases convergence is explained by ‘modernizing forces’, i.e. a range of social and economic forces produced by industrial development. However, this macro-level explanation bears the risk of obscuring analytically distinct processes that contribute to policy convergence (Bennett 1991b).

While we do not doubt the general explanatory potential of these approaches, in our view economic globalization, political internationalization and ‘modernizing forces’ should be primarily regarded as driving forces at the macro-level of analysis. In order to fully understand processes of policy change and convergence, one must focus on the distinct political mechanisms by which these structural pressures are ‘translated’ into policy convergence. As Bennett has put it: ‘[I]t is not enough to say that comparable conditions produce comparable problems which produce comparable policies. There are also different political mechanisms, . . . through which policies might converge’ (Bennett 1991b: 217). In this article, we therefore ask how and through which intermediate mechanisms (causal linkages) the structural changes and the ‘modernizing forces’ affect domestic policies in such a way that policies converge across countries. In line with a growing interest in mechanism- and process-based accounts in political science which ‘explain salient features of episodes, or significant differences among them, by identifying within those episodes robust mechanisms of relatively general scope’ (Tilly 2001: 24; see also Hedström and Swedberg 1998) we conceive of mechanisms as ‘recurrent processes linking specified initial conditions and a specific outcome’ (Mayntz 2004: 241). The mechanisms that eventually may lead to policy change and convergence are numerous. They include such diverse processes as independent but similar domestic responses to similar policy problems, negotiation of and compliance with multilateral agreements, supranational law-making, hegemonic coercion, intergovernmental reinforcement, regulatory competition, persuasion, peer-pressure, learning or imitation, to name just a few. In order to categorize this wide array of possible causes of policy convergence, we propose a typology of three broad classes of mechanisms: (1) the co-operative *harmonization* of domestic practices by means of international legal agreements or supranational law, (2) the coercive *imposition* of political practices by means of economic, political or even military threat, intervention or conditionality; and (3) the interdependent, but un-coordinated *diffusion* of practices by means of cross-national imitation, emulation or learning. These classes of mechanisms are distinct with regard to their mode of operation, the principal motivations of policy-makers to adopt policies and the leeway they grant national policy-makers to influence the content and independently decide on the adoption of a policy. Since we are mostly interested in the international sources of policy convergence, this typology does not include a fourth class of

mechanisms, namely independent domestic responses to similar policy problems or functional requirements. However, in our empirical analysis this ‘null hypothesis’ is always taken into account.

Harmonization

The term harmonization as it is being used here integrates mechanisms such as negotiation, legalization, compliance and enforcement. In international relations, harmonization is conceptualized as a multilateral and state-centred process where international negotiations among sovereign states and subsequent policy formulation leads to domestic implementation and compliance.¹ The same states that create the regulations are also responsible for their implementation. Thus, in processes of harmonization, sources and targets of political decisions are identical.

Harmonization is characterized by highly institutionalized and centralized top-down decision-making procedures in the course of which the co-operating states consent on the international harmonization of their policies. It involves the conscious and negotiated modification of domestic policies by governments committed to cross-national standards which they have had a hand in drafting (Howlett 2000: 308). Of course, harmonization contributes to policy convergence only in so far as the agreed rules prescribe the implementation of similar policies and states comply with these rules.

While nations participate voluntarily in this multilateral decision-making, once an agreement is reached and ‘legalized’, they are more or less strongly obliged to comply with and to implement it (Abbott and Snidal 2000; Abbott *et al.* 2000). Thus, harmonization involves some sacrifice of national autonomy and sovereignty.

Nations largely share similar motivations when they negotiate and implement international agreements or supranational regulations. They either attempt to improve the management of collective, typically transboundary, problems where unilateral action offers at best unsatisfactory solutions or collective action problems hinder an effective management, or they seek to avoid negative externalities of unilateral action and hope to realize positive gains (Martin and Simmons 1998).

Imposition

Imposition² involves a set of mechanisms ranging from forceful coercion to economic and political conditionality. At a lower level of analysis, coercion encompasses further sub-mechanisms like economic sanctions or military intervention. Similarly, conditionality can be disaggregated into the sub-mechanisms of intergovernmental reinforcement by reward, by punishment or by support (Schimmelfennig and Sedelmeier 2004: 663–4). In general terms, imposition occurs when external actors intentionally force nations to adopt policy innovations which they would not have adopted otherwise and do so by exploiting

economic or political power asymmetries. Thus, in contrast to harmonization, sources and targets of this mechanism no longer coincide.

In the case of imposition the involved actors differ fundamentally in their principal motivations as well as in their opportunities to shape the content of the adopted policies. Policy-makers in the targeted nations have little or no opportunity to influence the policy content which is determined by the imposing actor. The principal motivation for actors that attempt to impose policies is to export their fundamental values and principles. By contrast, policy-makers in nations on which policies are imposed either simply shy away from superior power or cede to the demands because of expected political or economic benefits which imposing actors offer in exchange for conformity with their demands. These incentives range from access to monetary resources, e.g. development loans, to access to important organizations or institutions, e.g. membership of the European Union (EU).

In sum, imposition eliminates almost any voluntary element in national decisions to adopt a policy innovation. More often than not, nations targeted by imposition cannot afford to defy and resist the political or economic conditionality, although the option to forgo the incentives or face the consequences of non-conformity with external demands exists, at least theoretically.

Diffusion

While processes of harmonization and imposition without any doubt contribute to policy convergence, several studies observed policy convergence even in the absence of these mechanisms. Research on international norm dynamics, for example, has revealed that global norms and principles can become influential without first being spelled out in international agreements (Finnemore 1996; Finnemore and Sikkink 1998). The alternative explanations, that policy convergence results from a more or less accidental accumulation of independent national reactions to economic and political globalization or modernizing forces, falls short of systematically recognizing the growing density of communicative interlinkages among nations. These interlinkages make independent and isolated national policy decisions increasingly unlikely (Lazer 2005). Unsurprisingly, thus, this type of structural explanation has increasingly been challenged (Drezner 2001). Against this background, we argue that diffusion constitutes a third and distinct class of convergence mechanisms which need to be systematically integrated in the analyses of policy convergence. Diffusion processes have for a long time received considerable attention in explaining policy convergence at the national level (Walker 1969; Gray 1973; Berry and Berry 1999). More recently, a growing number of studies have gone beyond anecdotal references and applied this concept systematically to the international level (Jordana and Levi-Faur 2005; Gilardi 2005; Busch and Jörgens 2005a; Busch *et al.* 2005; Way 2005; Simmons and Elkins 2004; Kern *et al.* 2001; Bennett 1988).

In accordance with the existing literature, we define diffusion as a process by which policy innovations are communicated in the international system and adopted voluntarily by an increasing number of countries over time (see Elkins and Simmons 2005; Rogers 2003; Dolowitz and Marsh 2000). Diffusion refers to an international spread of policy innovations driven by information flows rather than by hierarchical or collective decision-making within international institutions. At the micro-level it is triggered by mechanisms of social learning, copying or mimetic emulation (Jørgens 2004; Orenstein 2003). The essential feature of policy diffusion is that it occurs in the absence of formal or contractual obligation. Moreover, diffusion is basically a horizontal process whereby individually adopted policies and programmes add up to a decentralized regulatory structure (see Levi-Faur 2005). Unlike in the case of multilateral legal treaties, which are negotiated centrally between states and subsequently implemented top-down, with diffusion, decision-making procedures are decentralized and remain at the national level. Diffusion becomes manifest only through the accumulation of individual cases of imitation, emulation or learning with respect to one and the same policy item. In the absence of a centralized regulatory regime with highly visible and explicitly stated aims, international policy diffusion may thus result in a 'regulatory revolution by stealth' (Levi-Faur and Jordana 2005: 8).

While our understanding of diffusion follows the predominant use of this concept in the recent literature (for an overview, see Elkins and Simmons 2005; see also Rogers 2003; Howlett 2000; Bennett 1991a, 1997); it contradicts those approaches that view diffusion as an outcome rather than a process. A prominent example for this body of literature is Eyestone's understanding of diffusion as 'any pattern of successive adoption of a policy innovation' (Eyestone 1977: 441). This understanding of diffusion as the sum of all domestic adoptions of a policy innovation, regardless of the particular causal mechanisms through which these adoptions were brought about, certainly is legitimate. However, its analytical usefulness for the study of policy change and convergence is rather limited. Instead of explaining how policies spread internationally, it merely provides a new linguistic term for the rather trivial observation that policies actually spread from one country to another. Moreover, as Elkins and Simmons convincingly argue, the natural science analogy makes little sense in social or political processes.

In the natural sciences, diffusion usually refers to the spread of molecules from an area of high concentration to one of low concentration, resulting in a more uniform, and thinned-out, distribution of the molecules. With the spread of social practices, however, this sense of 'thinning-out' is irrelevant, if not altogether wrong. That is, the source or epicenter of diffusion is not necessarily 'depleted' when the practice spreads to another area.

(Elkins and Simmons 2005: 36)

Therefore, political scientists increasingly use diffusion as a 'flagship term for a large class of mechanisms and processes associated with a likely outcome' (Elkins

and Simmons 2005: 36). At the most general level, these mechanisms are characterized by interdependent, but unco-ordinated, decision-making. Their underlying rationale is that the political choices of one country affect the subsequent choices of other countries, 'but not through any collaboration, imposition, or otherwise programmed effort on the part of any of the actors' (Elkins and Simmons 2005: 38).

National policy-makers are motivated by several reasons to emulate other countries' policies. Firstly, they may act in a rational and problem-oriented manner by looking across national borders for effective solutions to pressing domestic problems (Dolowitz and Marsh 2000; Rose 1991). Secondly, they may be persuaded, but in contrast to imposition not forced, by other actors to adopt policies from abroad (Finnemore 1993; Keck and Sikkink 1998). Thirdly, they may be motivated by norm-driven and legitimacy-oriented considerations. Once a policy innovation has been adopted by a fair number of countries, this will result in increased pressure for conformity. Moreover, it will offer domestic political élites new means for increasing their legitimacy and for enhancing their self-esteem in an international society structured by emerging normative standards of appropriate behaviour (Markus 1987; Finnemore and Sikkink 1998).

Diffusion, harmonization and imposition at a glance

Summarizing the above distinctions, a typology of three distinct classes of convergence mechanisms emerges (Figure 1). The typology has by no means explanatory or theory status. Rather, it provides a heuristic model which serves cognitive purposes and allows for more systematic analysis of the evolution of policy convergence. The three classes of mechanisms are ideal types whose boundaries may to some extent be blurred in the real world.

The typology put forward here is supported by a number of other scholarly efforts to systematize the ways in which international processes have an effect on domestic policy-making and contribute to convergence. Howlett (2000) uses the terms 'harmonization', 'domination' and 'emulation' when reasoning about international influences on policy convergence. Bennett (1991b) distinguishes 'emulation', 'harmonization', 'élite networking' and 'penetration' when accounting for this phenomenon. Both terminologies share a significant conceptual overlap with our distinction. In a similar vein, Dolowitz and Marsh (2000) conceptualize different types of policy transfer along a continuum ranging from voluntary lesson-drawing over obligated transfer to direct imposition. In the field of organizational sociology, DiMaggio and Powell (1983) have argued that institutional isomorphism – that is, the process through which organizations in a given social system grow similar over time – can be either 'coercive', 'mimetic' or 'normative'. Contrary to the model proposed here, DiMaggio and Powell subsume both asymmetric power relationships and legal standard-setting under the heading of coercive isomorphism. In return, both mimetic and normative isomorphism are variants of what is

| CLASS OF MECHANISMS | DIFFUSION | HARMONIZATION | IMPOSITION |
|--|--|---|---|
| Mode of operation | Persuasion, emulation and learning Decentralized decision-making | Negotiation, enforcement and monitoring Centralized and joint decision-making | Coercion, political or economic conditionality Decentralized decision-making |
| Principal motivations of national policy-makers to adopt external policy models | <ul style="list-style-type: none"> • Search for effective solutions to domestic problems • Gain internal and external legitimacy | <ul style="list-style-type: none"> • Manage effectively transboundary challenges and at the same time dissatisfaction with solutions to transboundary challenges provided for by unilateral action • Avoid negative externalities (e.g. trade distortions) • Realize positive gains (e.g. access to new markets) | <ul style="list-style-type: none"> • Export fundamental values and principles as well as policies perceived to be successful • Access to economic and political resources (e.g. joint international decision-making bodies or gain financial support) • Avoid negative consequences (e.g. sanctions) |
| Degree of influence on design of policy innovation and decision to adopt it | | | |

Figure 1 Typology of international convergence mechanisms

labelled here ‘diffusion’. While these differences are mainly attributable to differences in the subject of analysis—nations, on the one hand, and organizations, on the other – the work of DiMaggio Powell makes a strong argument for the importance of non-hierarchical emulation and learning, even in those environments where authoritative decision-making is a valid option.

THE INTERNATIONAL SPREAD OF ENVIRONMENTAL POLICY INNOVATIONS

This section analyses the international spread of three different kinds of policy innovations: national environmental policy plans and sustainable development strategies (general policy programmes), environmental ministries and agencies (institutions) as well as feed-in tariffs and quotas for the promotion of renewable electricity (instruments). The country set encompasses forty-three countries which can be divided into two main groups: industrialized countries³ and Central and Eastern European (CEE) countries.⁴ The policy innovations were selected from an empirical study which analyses the spread of twenty-two environmental policy innovations across these countries from 1945 to 2000. For eight of these policy innovations our data even cover the worldwide spread (Busch and Jörgens 2005a, 2005b).

The analysis at hand investigates convergence with regard to whether a policy or institution is in place and whether a similar type of instrument is being applied in different countries. If the number of countries with a similar policy innovation in place, e.g. environmental ministries, increases over time, these countries increasingly grow alike or converge with regard to this policy innovation. We defined for each policy innovation a set of basic characteristics. To be considered as 'adopted' and taken into account in the analysis, these minimum criteria had to be matched by the design of the respective policy, institution or instrument in every country.⁵ The minimum criteria, however, tolerate some differences because '[i]n the real world we would never expect a programme to transfer from one government to another without history, culture and institutions being taken into account' (Rose 1991: 21; see Bennett 1991b for a detailed discussion). For example, it would make little sense to consider only environmental ministries as similar which employ identical numbers of civil servants.

National environmental strategies

Environmental strategies are comprehensive governmental programmes of action that are developed with the participation of a wide range of societal actors and that formulate medium- and long-term goals for an economically and socially sound environmental policy (Jänicke and Jörgens 1998). Empirically, two types of strategic approaches can be distinguished: *environmental policy plans* which focus predominantly on environmental problems and view social and economic aspects merely as important constraints, and *sustainable development strategies* which attempt to set separate goals for all the environmental, social and economic dimensions of sustainable development.

Environmental strategies have spread rapidly since the 1980s. By 2003, twenty-three out of twenty-five industrialized and all CEE countries had formulated an environmental strategy (Figure 2). Worldwide, 14 countries had formulated a national environmental strategy by 2003 (Busch and Jörgens 2005b). Although marked differences remain in these plans in respect of both

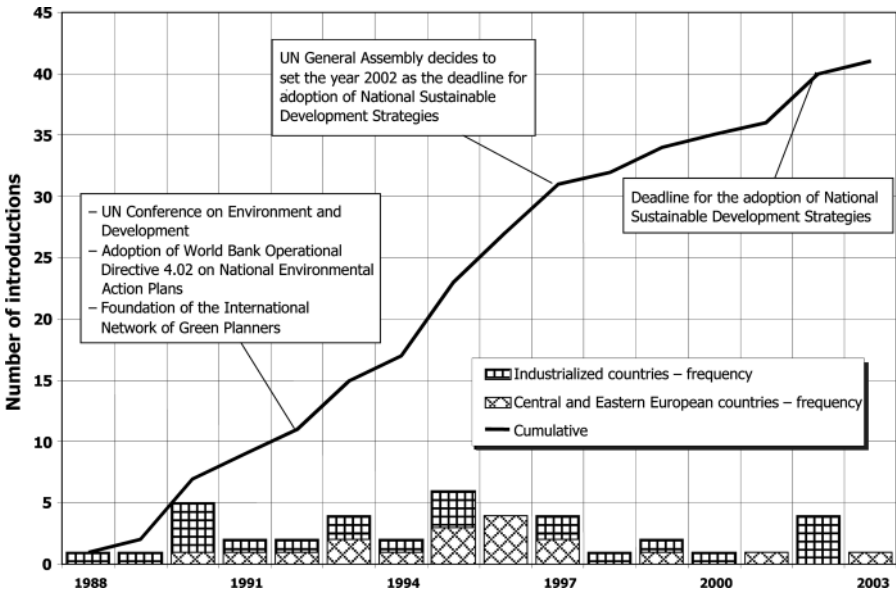


Figure 2 International spread of environmental strategies*

*Only the first adoption of an environmental strategy, either an environmental policy plan or a sustainable development strategy, is counted.

the relevance and the specificity of their goals (Jänicke and Jörgens 1998), all use an approach of targeted, cross-media and – at least in intention – participatory environmental planning.

Within the group of industrialized countries, the main driving force behind the spread of environmental strategies was diffusion. Initially, direct policy transfer played an important role. For example, the Dutch National Environmental Policy Plan of 1989 was rapidly elevated into a widely recognized model. It was imitated by several industrialized countries and served as an important source of inspiration to others (Jörgens 2004). During the 1990s, the diffusion of this policy innovation became increasingly institutionalised at the international level. In 1992 the United Nations Conference on Environment and Development (UNCED) recommended in Agenda 21 that ‘[g]overnments should adopt a national strategy for sustainable development’. This recommendation was neither legally binding nor specified any point in time by when compliance was expected. Thus, it involved a relatively low degree of formal obligation and left it to policy-makers to decide whether or not to adopt an environmental strategy. Almost all strategies which were adopted between 1992 and 1997 include prominent references to UNCED and Agenda 21. Also in 1992 the EU adopted its Fifth Environmental Action Programme (EAP), which strongly influenced the development of environmental strategies in numerous Western European countries and was itself

inspired by the Dutch model (Jörgens 2004). While many European strategies explicitly refer to the EU's EAP, some, like the Austrian National Environmental Plan, went so far as to copy central elements of the EAP (Pleschberger 1999). In these cases, therefore, the Dutch model diffused from the national to the supranational level of the EU and back to the national level of EU member states – a process which Padgett refers to as 'uploading' and 'downloading' (Padgett 2003: 227–8).

Following the UNCED a wide range of domestic or transnational, governmental or non-governmental actors started using the prescriptions of Agenda 21 as a point of reference for their demands. In 1993 the Organization for Economic Co-operation and Development (OECD) included an environmental strategy among the criteria in its Environmental Performance Reviews. In 1992 an International Network of Green Planners was created, which until its termination in 2004 provided a forum for policy-makers to share information, learn from experiences and promote the spread of environmental strategies. At the domestic level, opposition parties as well as non-governmental environment organizations regularly referred to Agenda 21 to exert pressure on governments to adopt an environment strategy. Overall, implementing the international norm of sustainable development through sustainability strategies had become a major manifestation of appropriate government behaviour (Jörgens 2004).

Diffusion processes also occurred in CEE and in the so-called newly independent states (NIS). Again, the EU's Fifth EAP was an important reference point for domestic initiatives. Another driver was the 1993 EAP for CEE. Implementation of this programme, whose main objective was the establishment of environmental strategies in CEE, was to be overseen by a newly created task force which 'brought together national environmental officials from all CEE countries and the NIS'. Its main function 'was to support a mutual effort in' "learning by doing" – exchanging experience, identifying "best practices", and stimulating co-operation and support among network members' (OECD 1998: 20).

The dominant mechanism in CEE, however, was the imposition of environmental strategies by means of economic conditionality. The main actor was the World Bank. Its Operational Directive 4.02 from 1992 formally required the preparation of National Environmental Action Plans (NEAPs) as a condition for receiving World Bank loans and effectively made this instrument mandatory for borrower countries. In CEE the adoptions of Albania (1993), Moldova (1995), Macedonia (1997) and Bosnia-Herzegovina (2003) were triggered by World Bank conditionality. In the more developed CEE countries, other organizations took the place of the World Bank as environmental strategies were 'being implemented . . . primarily at the direct instigation of aid donors who have insisted on such planning exercises as a necessary prerequisite to cost-effective environmental investments' (Connolly and Gutner 2002).

Ten years after the first introduction of an environmental strategy and the start of its remarkable spread across 113 countries driven mainly by imposition

and diffusion, the UN General Assembly passed a resolution calling all UN members to complete a sustainable development strategy by 2002. While UN declarations and resolutions do not constitute binding international law, by setting a fixed deadline and establishing supervisory mechanisms the resolution contained two important elements which characterize international law and which augmented significantly the pressure on governments to comply with the resolution. It can be argued, therefore, that since 1997 harmonization has increasingly become the dominant driver of the global spread of environmental strategies. Within the group of industrialized countries it replaced imitation and learning as principal mechanisms of spread. In Central and Eastern Europe the situation was different. Owing to the different objects of spread – NEAPs imposed by the World Bank constitute a well-specified sub-type of environmental strategies that is clearly distinct from sustainable development strategies promoted by the United Nations – imposition was not replaced by harmonization, but was merely supplemented by it.

As a result, within the OECD a total of fourteen out of thirty OECD member governments formally adopted a National Strategy for Sustainable Development in the period from 1997 to 2003. Even more interesting is that, in 2002 alone, a total of ten OECD countries either formally adopted their strategy or presented a complete draft. Altogether, twenty out of twenty-five, industrialized countries had adopted a sustainable development strategy and twenty-three an environmental policy plan (Figure 3).⁶ Only four

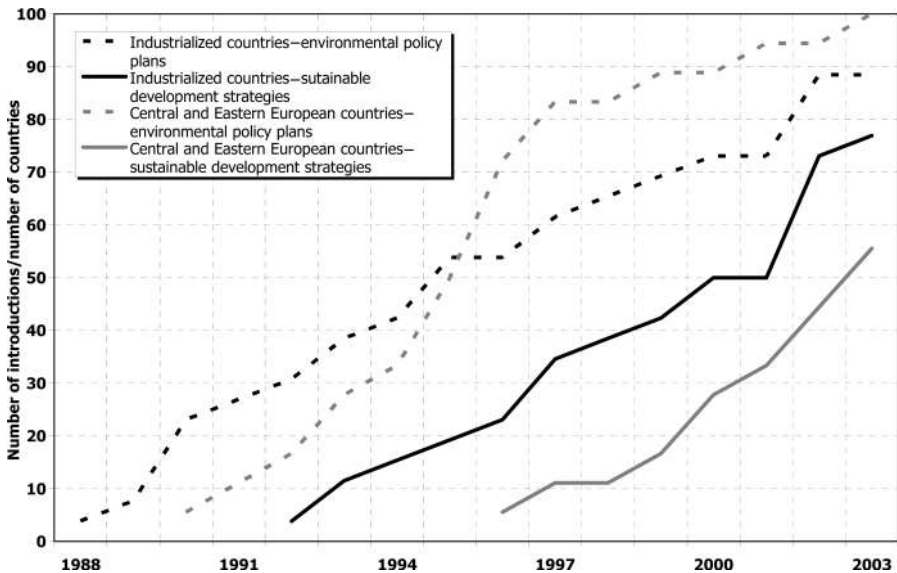


Figure 3 International spread of sustainable development strategies and environmental policy plans

Source: Own data.

OECD members – Mexico, New Zealand, Turkey, and the United States – had not adopted a National Sustainable Development Strategy or at least announced its publication by the year 2003 (Jörgens 2004). In CEE countries the adoption of environmental action plans and sustainable development strategies varied significantly from the industrialized countries. While all CEE countries had formulated a NEAP by 2003, only ten out of eighteen had adopted a sustainable development strategy.

This observation suggests, first of all, that in CEE the imposition of NEAPs by the World Bank and other donor agencies had stronger effects than the ‘soft’ harmonization by the UN resolution. Two reasons can be found for this. First, by the time the UN resolution was adopted, a majority of the CEE countries were already engaged in the formulation of NEAPs. These countries simply lacked the political and administrative capacity to start yet another process of reporting and strategy formulation. Second, in the face of limited national capacities for environmental strategy formulation, NEAPs, driven by economic conditionality, were given priority over sustainable development strategies driven by legal but basically unenforceable international agreement. Having to choose between money and reputation, most CEE countries and many more developing countries opted for the former (Busch and Jörgens 2005b; Jörgens 2004).

Environmental institutions

Environmental concerns can be institutionalized in the domestic political system in a number of ways. Governments may create independent environmental ministries or agencies, set up independent advisory institutions, such as scientific expert councils or sustainability commissions, or establish environmental departments in non-environmental ministries. The following section focuses on two of these alternatives by analysing the international spread of environmental ministries and agencies. Both institutions constitute an important step in the creation of national capacities for environmental protection and indicate a country’s concern about environmental issues (Jörgens 1996).

Environmental ministries address a broad range of environmental issues. They prepare and implement environment related decisions, regulations and laws; they adopt environmental programmes and represent domestic environmental interests in international policy processes. Except for the US, where only an environmental agency with ministerial competencies exists, all industrialized and CEE countries had established a national ministry for the environment by the year 2003 (Figure 4).

Environmental agencies, by contrast, conduct research, generate and compile data on the state of the environment, inform the public, and advise responsible ministries. Their international spread was slower and less complete with environmental agencies being created in eighteen out of twenty-five industrialized, but only eight out of eighteen CEE countries (Figure 5).

Neither imposition nor harmonization could be observed during the spread of both environmental ministries and agencies as no binding international laws

existed which obliged countries to establish these institutions. Some indications suggest, however, that processes of diffusion contributed significantly to the international proliferation of these institutional innovations.

In both cases the rate of adoption significantly increased above the overall average of annual introductions in the early 1970s and 1990s (Figures 4 and 5). Against this background, the explanatory null hypothesis that the accelerations simply and exclusively resulted from accidental culminations of independent and unconnected national responses to domestic problems appears at best implausible. Environmental challenges did not only emerge in the early 1970s or 1990s, but had already been on domestic policy agendas for several decades. Nor could a sudden intensification of environmental pressures be observed by that time which could have accounted for the culmination (Meyer *et al.* 1997: 627).

The accelerations, however, coincided with outstanding international events and policy developments which institutionalized the communication and exchange of experiences among nations on environmental management, including possible institutional responses at country level. Most important in this regard were the UN Conference on the Human Environment (UNCHE) in 1972 in Stockholm and the UNCED in 1992 in Rio de Janeiro as well the creation of the OECD Environmental Policy Committee in 1970 and of the UN Environment Programme (UNEP) in 1972. This coincidence does not suffice to claim that diffusion was driving the spread of environmental ministries and agencies. But these events indicate a significant rise in international

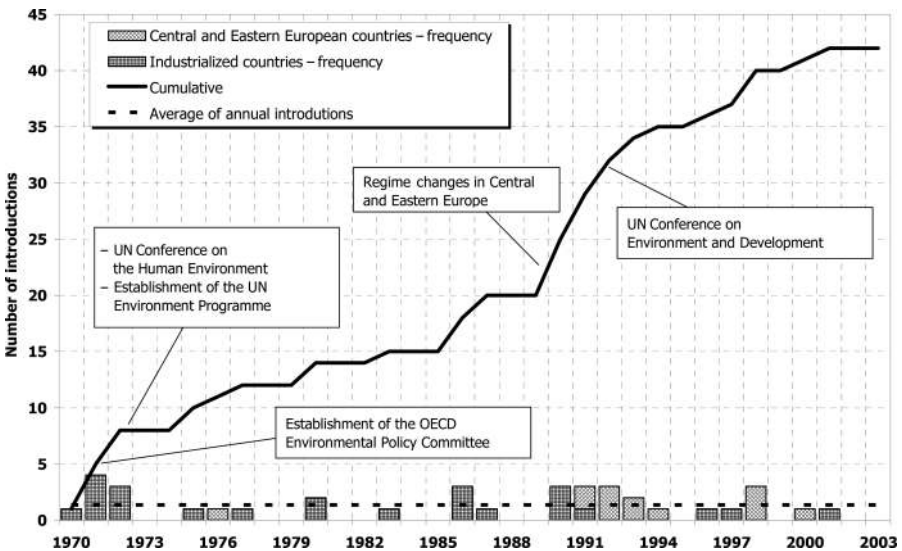


Figure 4 International spread of environmental ministries

Source: Own data.

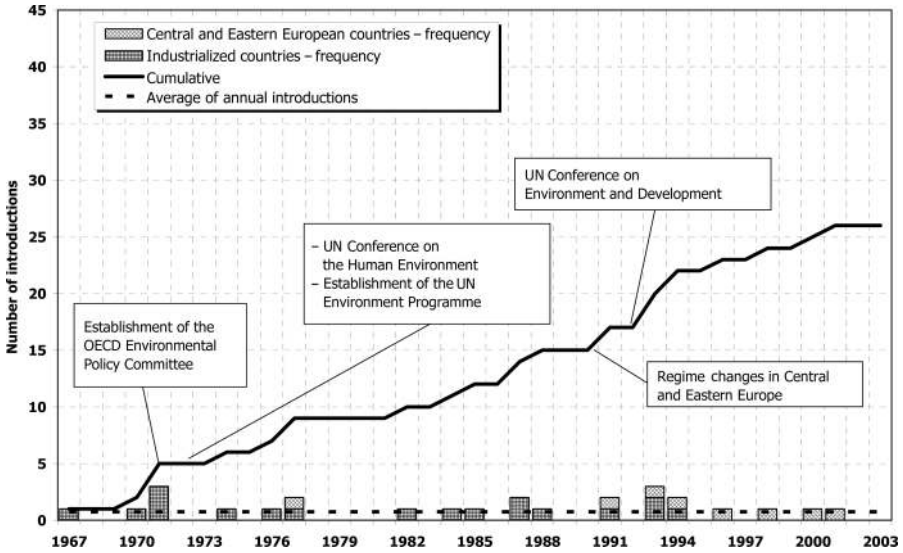


Figure 5 International spread of environmental agencies
 Source: Own data.

interaction and communication which principally enhances the likelihood of diffusion (Berry and Berry 1999). Thus, they weaken once more the assumption that nations simply responded independently to identical problems without taking note of experiences and approaches communicated in the international system.

Moreover, it is reasonable to assume that these international events and related processes affected the establishment of national environmental institutions in a number of ways (see Haas 2002 for similar arguments). First of all, the variety of preparatory meetings and activities preceding the UN conferences certainly stimulated countries to (re-)consider their existing efforts in managing environmental challenges. Secondly, the widely visible preparatory processes of these high-level intergovernmental conferences on environmental issues prompted governments to ponder ways to effectively represent their national interests at the international level (Küppers *et al.* 1978). An effective way for governments to determine their specific international interests in this newly globalizing issue area, and to competently defend these interests at international gathering, was to create specialized environmental agencies or ministries within the national government. Likewise, well-defined domestic responsibilities facilitate the effective representation of national interests in permanent intergovernmental forums like the OECD's Environmental Policy Committee or UNEP. Meyer *et al.* even argue 'that formalized national ministries arise only when enough international conferences and organizations exist for ministers to attend' (Meyer *et al.* 1997: 639). Finally, Principle 17 of

the Stockholm Declaration specifically urged countries to institutionalize environmental concerns at the domestic level: 'Appropriate institutions must be entrusted with the task of planning, managing or controlling the environmental resources of states with a view to enhancing environmental quality.' Tolba *et al.* (1995) argue that this demand can be interpreted as a non-binding commitment of governments to establish environmental institutions. The creation of environmental ministries or agencies enabled governments to respond to these international stimuli. In the early stages of environmental institutionalization ministries and agencies were conceived of as equal alternatives. Governments entrusted either a ministry or an agency with the main responsibility for environment related tasks. Many of the agencies which were founded in the 1970s were vested with executive competencies comparable to those of ministries, namely in Denmark, Sweden, Japan, the US and Switzerland. Later, ministries evolved into the principal model for institutionalizing environmental protection. Today, only one country, the US, has failed to set up a federal ministry of the environment and concentrates environmental responsibilities in the hands of its Environmental Protection Agency. By contrast, sixteen countries refrained altogether from establishing an environmental agency.

Against this background, it appears reasonable to claim that diffusion mechanisms contributed to a significant extent to the international spread of environmental ministries and agencies, particularly in the 1970s. International communication and exchange of experiences on how to manage environmental challenges as well as specific demands or incentives for creating environmental institutions affected national decisions to voluntarily set up ministries or agencies. Moreover, Meyer *et al.* (1997) argue that, taken together, developments at the international level since the early 1970s contributed to the emergence of a 'world environment regime'. This regime established environmental protection and its domestic institutionalization as an international norm for modern statehood. The effect of this normative pressure becomes particularly evident when considering that eleven out of eighteen newly independent or created CEE countries chose to establish an environmental ministry within the first three years of national sovereignty (Figure 6).

On the one hand, this surge can apparently be interpreted as a result of the political transformation processes in CEE since 1989. On the other hand, the management of other challenges, such as economic and democratic development, was certainly more urgent by that time. Moreover, financial resources were scarce and many countries lacked the political and administrative capacities for the creation of new bureaucracies. Against this background, it is even more striking that, in a comparably short period of time, a large number of governments in CEE decided to set up environmental ministries. This behaviour suggests that governments in CEE may have felt the need to conform to international normative pressure to address environmental issues. By creating environmental ministries policy-makers evidently signalled to the world that they take environmental challenges seriously and match the normative expectations arising from the world environment regime. Environmental

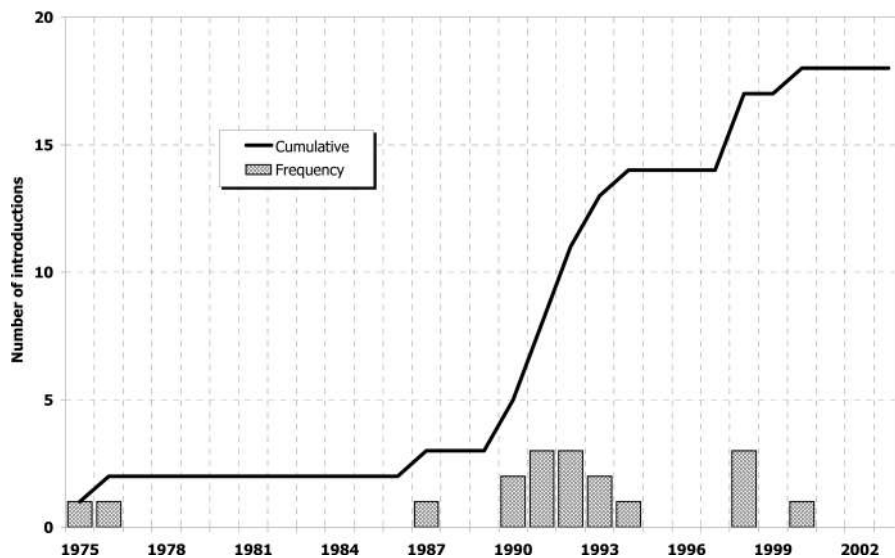


Figure 6 International spread of environmental agencies
Source: Own data.

protection, symbolized through the creation of environmental ministries, had become taken for granted as an essential element of responsible governance.

Altogether, the creation of environmental ministries and agencies can thus be attributed to a significant degree to mechanisms of policy diffusion.

The promotion of renewable electricity

Governments utilize a broad range of instruments for increasing the use of renewable energy sources in electricity generation. However, two instruments stand out in the policy debate: feed-in tariffs and quotas. The following analysis compares the international spread of these two instruments.

Feed-in tariffs oblige network operators, energy traders or consumers to buy electricity generated by renewables and to pay a fixed price. By 2003, eighteen European countries had introduced feed-in tariffs, whereas no non-European countries had adopted this policy innovation (Figure 7).

Quotas for renewable electricity predominantly target energy producers by defining a minimum share of electricity generated from renewables. National regulators require these actors to acquire a sufficient quantity of certificates which are issued in exchange for a specified amount of renewable electricity. Either energy producers acquire these certificates by actually producing electricity from renewables or they purchase surplus certificates from other energy producers whose production exceeds their minimum share. Non-complying

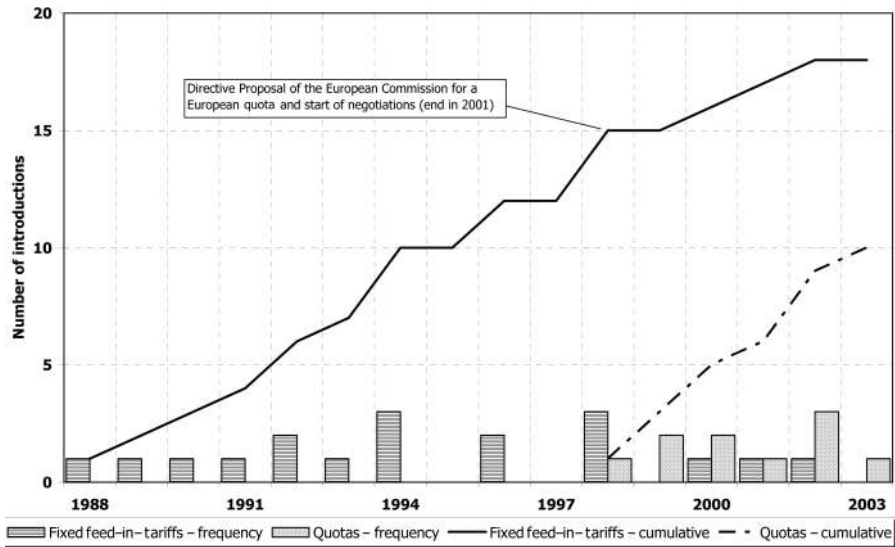


Figure 7 Spread of feed-in tariffs and quotas for renewable electricity
Source: Own data.

actors with an insufficient number of certificates are fined. By 2003, ten countries had introduced quotas, eight of which were members of the EU (Figure 7).

The international spread of feed-in tariffs and quotas was driven neither by mechanisms of harmonization or imposition. Rather, the analysis of both processes points to an important role of diffusion mechanisms in the instruments' spread.

In the case of feed-in tariffs, diffusion was mainly restricted to individual cases of horizontal learning and emulation. In particular, the German regulations became a policy model for many other countries. In Switzerland, Austria, France, Greece and the Czech Republic policy-makers were inspired by the German feed-in tariff and drew on this model when designing their own national regulations (Busch 2003; Busch and Jörgens 2005b). These governments, as well as others, systematically searched for policies already implemented elsewhere before deciding upon their own ways of promoting the generation of electricity from renewables. The French government, for example, drew on an analysis of various policy instruments for the promotion of renewable electricity in six European countries. The explicit aim of this study commissioned by the French government was to identify successful policies which were transferable to the French context (Cochet 2000).

In the case of quotas, the flow of information about this instrument was institutionalized at the international level. In particular, the intention of the European Commission to harmonize the promotion of renewable electricity contributed to this institutionalization. The Commission made it very clear

that it would prefer quotas as a model for harmonizing regulations for the generation of electricity from renewables. In a working paper published in 1998 the Commission writes: ‘[T]he move from a tariff approach towards one based on trade and competition [i.e. quotas and renewable energy certificates trade] is at some stage inevitable’ (European Commission 1998: 17). The Commission, moreover, funded several research projects examining the implications of a European-wide introduction of quotas as well as the conditions for their successful implementation. The Renewable Energy Certificate (REC) System – an organization which aimed to establish an institutional framework that allows for the European-wide introduction and operation of quotas – was financially supported by the Commission (Busch 2003). Accordingly, the European Commission drafted and presented a directive in 1998 demanding the prohibition of feed-in tariffs and the introduction of quotas.⁷ Lauber argues that the Commission’s preference affected several national decisions to introduce a quota: ‘[I]n the preparation of the EU directive, several states prepared (...) [quota] systems at the domestic level, on the assumption that this was the best market approach and with the expectation that a European market for RECs would develop in the near future’ (Lauber 2001: 8) A concrete example of this strategy is Denmark (see Meyer 2003).

Strikingly, in the very year when the Commission stated its preference and quotas started to spread, the annual average of introductions of feed-in tariffs decreased (1.4 from 1988 to 1998 and 0.6 from 1999 to 2003) (Figure 7). If decisions to abolish feed-in tariffs are taken into account, this decrease is even more significant (Figure 8). Poland and Italy replaced their feed-in tariffs

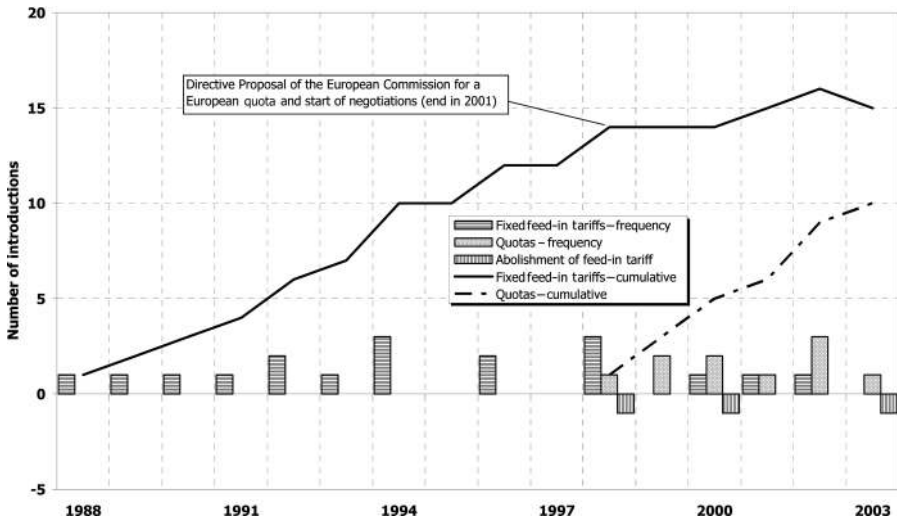


Figure 8 International spread of feed-in tariffs and quotas for renewable electricity
Source: Own data.

with a quota. Denmark and Sweden plan to abolish their feed-in tariffs once the already adopted quotas are operating properly (Busch and Jörgens 2005b). Denmark made this shift because it expected quotas to become the standard in the EU (Meyer 2003).

These observations suggest that the international institutionalization of information flows driving the spread of quotas may have slowed the spread of the competing instrument of feed-in tariffs which was driven by diffusion as well, but characterized by direct and horizontal processes of emulation and learning between countries. However, institutionalized diffusion and the presentation of a draft harmonization directive by the European Commission alone cannot account for these effects. Other developments at the international level created political and legal uncertainties about the future of feed-in tariffs, possibly hampering their spread even more. In 1998, the European Parliament had rejected a Europe-wide introduction of feed-in tariffs. In the same year German energy companies had brought in action against the German feed-in tariff at the European Court of Justice which was eventually decided in 2001. Finally, in Brussels quotas were perceived to better fulfil market and competition rules. With the liberalization of the European internal market for electricity, this assessment increasingly gained importance as an evaluation criterion for national energy policies (Busch and Jörgens 2005b).

CONCLUSIONS

The conceptual distinction and empirical analysis support the claim that diffusion constitutes a class of convergence mechanisms in its own right. When seeking to understand policy convergence conceptually and empirically, neglecting diffusion risks overlooking a distinct and important type of convergence mechanism.

From a conceptual angle, it became evident that diffusion involves processes other than harmonization, imposition or the accidental accumulation of independent domestic reactions to identical problems or structural changes. The empirical findings demonstrate that it is necessary to distinguish between different groups of convergence mechanisms. It could be shown that policy convergence evolves not only as a result of harmonization or imposition. Nor can policy convergence be reduced to an accidental accumulation of independent domestic reactions to identical problems or structural changes. A reduction to these mechanisms and sources in empirical analyses of policy convergence risks overlooking processes of cross-national emulation and learning and their impact on policy convergence. The empirical analysis has thus shown that mechanisms of diffusion were important when accounting for policy convergence and could be observed in all cases.

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NOTES

- 1 The research on harmonization of policies forms an important element in the study of international co-operation and regimes which has been central to international relations (Simmons and Martin 2002; Kratochvil and Ruggie 1986; Rochester 1986; Hasenclever, *et al.* 1997; Levy *et al.* 1995; Haggard and Simmons 1987). Within the European context extensive research has been conducted by the European Union (EU) to analyse the impact of supranational regulations on domestic policy-making (Kohler-Koch and Eising 1999; Kohler-Koch, forthcoming; Scharpf 1999). Q2
- 2 Other related notions can be found in the literature: Dolowitz and Marsh (2000: 14–15) use the term ‘coercive transfer’, Bennett’s notion of ‘penetration’ is quite similar to imposition (1991a: 227–9) and Ikenberry speaks of ‘external inducement’ (1990: 99–101). Imposition has been studied most extensively in the realm of development aid (Keohane and Levy 1996; Nelson 1996; Nelson and Eglinton 1993; Olson 1979; Mosley *et al.* 1995). More recently, an increasing number of studies analyse imposition in connection with the enlargement of the EU to Central and Eastern European (CEE) countries, such as the special issue of the *Journal of European Public Policy* on ‘External governance in the European Union’ (see Schimmelfennig and Wagner 2004; Schimmelfennig and Sedelmeier 2004; see also Grabbe 2002; Tews 2002b). For historical examples, see Dolowitz and Marsh (1996, 2000); Stone (1999). Q3
- 3 Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Japan, Korea, Luxembourg, the Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, the United Kingdom and the USA.
- 4 Albania, Belarus, Bosnia Herzegovina, Bulgaria, Croatia, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Macedonia, Moldova, Poland, Romania, Russia, the Slovak Republic, Slovenia and Ukraine.
- 5 The major criteria are that policy innovations have to be of nation-wide scope (i.e. regional or state policies are not counted) and that they have to be adopted formally by governmental or parliamentary decision.
- 6 The reason why not all adoptions of national sustainable development strategies are reflected in the proliferation curve in Figure 3 is that many countries had already adopted an environmental strategy at an earlier time, and only this first national adoption of an environmental strategy is shown in the graph.

- 7 Owing to the resistance in particular of the German and Spanish governments this draft was not agreed upon. In September 2001 the European Commission finally adopted a framework directive leaving the decision on which policy should be implemented to the national governments until 2012.

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Queries

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- Q1 Simmons and Elkins 2003. The date is 2004 in the References. Please check.
- Q2 None of the references cited in note 1 are listed in the References. Please supply.
- Q3 In note 2 the following references are not listed in the References: Ikenberry 1990; Keohane and Levy 1996; Nelson 1996; Nelson and Eglington 1993; Olson 1979; Mosley, Harrigan and Toyne 1995; Grabbe 2002; Tews 2002b; Dolowitz and Marsh 1996.
- Q4 Are the following actually cited in the text?: Evans and Davies 1999; Kerr 1983; Leichter 1983; Seeliger 1996; Wolman 1992. May be deleted if so.
- Q5 Please check the spelling of Hldgate.