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FFU-report 01-2002

Forschungsstelle für Umweltpolitik

The Diffusion of New Environmental Policy Instruments

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Submitted to
European Journal of Political Research
May 5, 2001.
Revised and resubmitted, February 25, 2002

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The Diffusion of New Environmental Policy Instruments[1]

Abstract. New Environmental Policy Instruments (NEPIs) are increasingly discussed and adopted across countries. From a global perspective a rapid diffusion of these market based, voluntary or informational instruments can be observed. In our article – which is mainly explorative in nature – we argue that the adoption of NEPIs by national policy makers should not merely be interpreted as a reaction to newly emerging environmental problems or to real or perceived deficits of traditional (command and control) regulation in coping with those problems. To an important degree the use of NEPIs can be ascribed to the inner dynamics of international processes of policy transfer or policy diffusion, which make it increasingly difficult for national policy-makers to ignore new approaches in environmental policy that have already been put into practice in forerunner countries.

In a first step, the article outlines the concept of policy diffusion. In a second step, we will describe the trans-national spread of four different NEPIs (Eco-labels, Energy/Carbon Taxes, National Environmental Policy Plans/Strategies for Sustainable Development and Free-Access-of-Information (FAI) provisions) by showing the respective pattern of spread in empirically based curves. In a third step, the article analyses the underlying mechanisms of policy diffusion. We will argue that in addition to the national demand for adequate environmental policy instruments the spread of policy innovations is influenced by the presence or absence of international platforms or promoting agencies, which have placed the advancement of certain NEPIs on their agenda; and by the specific characteristics of the policy innovation itself.

Finally, we will draw some preliminary conclusions about the motivations of policy makers to adopt or to reject new environmental policy instruments. We argue that the utilization of a softer and more flexible approach cannot exclusively be explained by the decision makers' considerations of improving the efficiency of environmental policy making. Additionally, considerations of generating legitimacy affect the policy makers' decisions.

1 This article is based on findings from an ongoing research project on "The Diffusion of environmental policy innovations as an aspect of the globalisation of environmental policy" which is financed by the Volkswagen Foundation.

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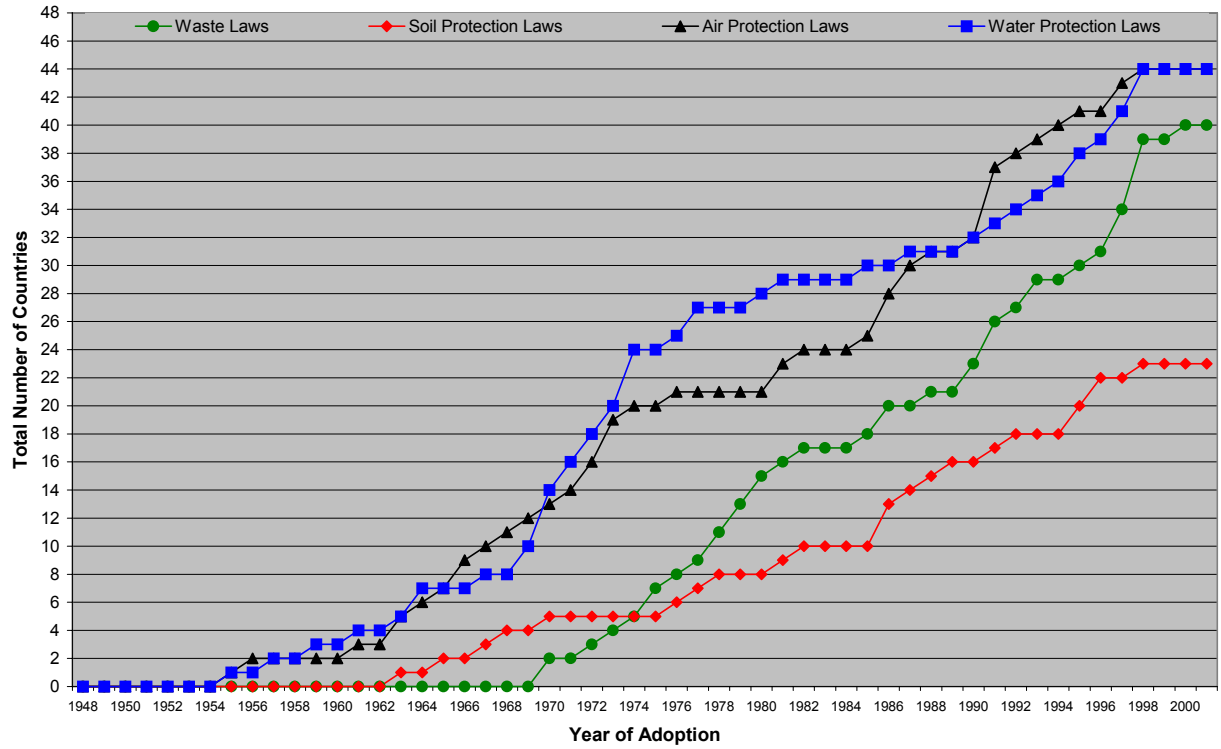
1. Introduction: Global Convergence of Regulatory Patterns in Environmental Policy

Recent comparative studies have revealed striking parallels in the development of national capacities for environmental protection across all OECD countries, and often beyond the borders of the Western industrialised world (Jänicke and Weidner 1997). Since the early 1950s almost all OECD and Central and Eastern European (CEE) countries have progressively adopted similar legislation in the areas of water and air protection as well as waste management (Weale 1992; Jänicke and Weidner 1997; Kern, Jörgens and Jänicke 2001; see figure 1). Additionally, new government bodies for environmental protection have been set up by all industrialised countries beginning in the late 1960s (Jörgens 1996).

Figure 1: Spread of Environmental Laws in OECD-Countries and Central and Eastern Europe



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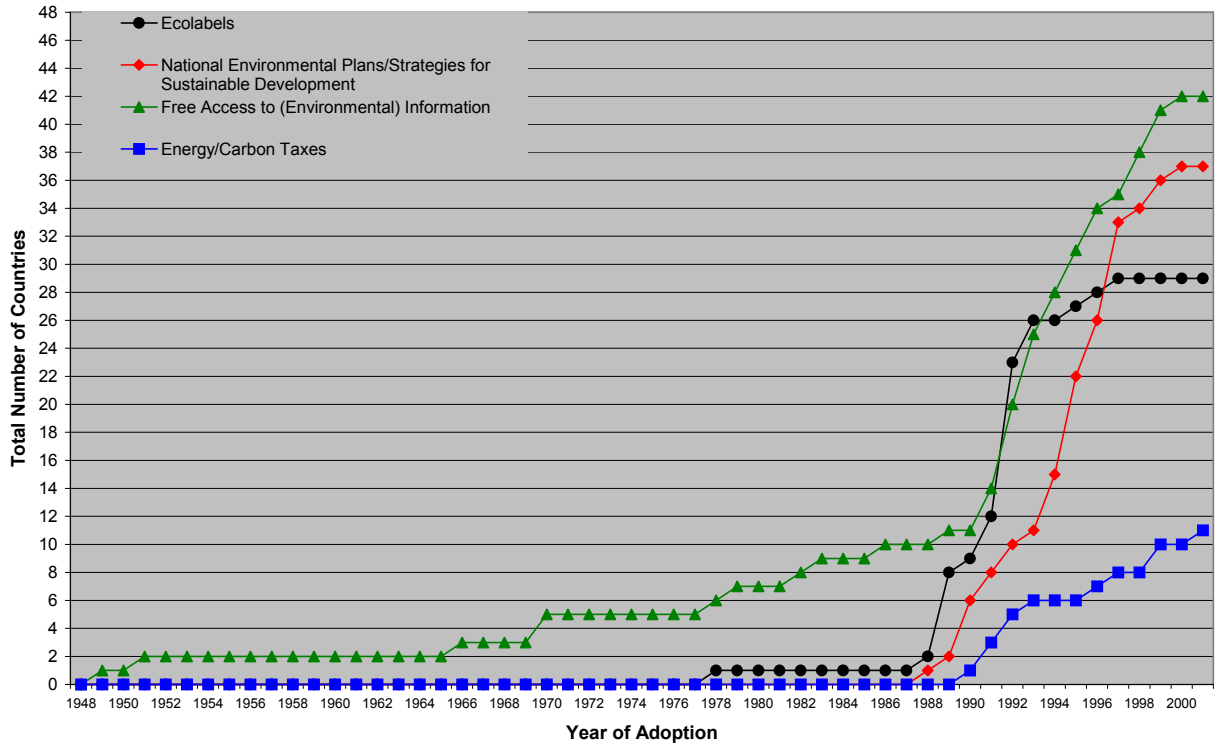
However, this more or less parallel development of national environmental policies is not restricted to the initial establishment of specific institutions and legislation in this comparatively new policy area. The more recent shift in the prevailing policy pattern from a fragmented and largely legally based regulatory approach to an integrated environmental policy characterised by "softer" and/or more flexible instruments such as voluntary agreements, eco-labels, or ecological tax reforms is equally proceeding on a global scale (figure 2). Generally, a global convergence of governance patterns in environmental policy can be observed. In contrast to the widespread assumption that policy convergence takes place at the level of the lowest common denominator, empirical data shows that the global development in the field of environmental pro-

tection has to an important extent been guided by the developmental status reached in front-runner countries (Kern 2000; Kern, Jörgens and Jänicke 2001).

How can this empirically observed convergence of regulatory patterns in environmental policy be explained? One possible explanation could be that governments throughout the world are reacting independently, but in a very similar way to more or less identical environmental problem pressures. Another explanation could be the simultaneous implementation of international or multilateral environmental agreements.

Figure 2: Spread of New Environmental Policy Instruments in OECD-Countries and Central and Eastern Europe



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However, empirical data indicate that global convergence of environmental policy can take place in the absence of any international regime. Moreover, policy convergence goes far beyond the area of transborder or global environmental problems which are being addressed by international environmental agreements. It often occurs with regard to environmental problems that primarily need to be solved at the regional or national level such as surface and groundwater pollution, urban air pollution, or waste management. A third explanation, therefore, could be that governments orient their own environmental policies to what is already being practised in other countries. The global convergence of environmental policies, then, could to an important extent be explained as a result of the international diffusion of ideas, approaches, institutions and instruments in the field of environmental protection.

2. Policy Diffusion – Mechanisms and Driving Forces

In order to fully explore the potential of the concept of policy diffusion for explaining global convergence in the field of environmental policy it is necessary to determine the principal mechanisms by which policy diffusion occurs as well as its main driving forces.

The growing body of literature on policy convergence as well as policy diffusion and policy transfer indicates that these processes are neither coincidental nor driven by any one simple mechanism which can easily be identified. Instead, a complex interplay of different factors have been found to influence the international spread of policies and the subsequent convergence of national policies. Taking into account these studies[2] we define three groups of factors which can be expected to affect the pattern of diffusion (speed, scope and degree of policy convergence).

I. Dynamics of the international system

By looking at the dynamics of the international system we intend to answer the question: How and why do environmental policy innovations spread internationally? The research focus is on channels of communication or interaction which link national political units with each other. Growing interlinkages between nation states both in terms of economic and trade relations as well as the institutional and societal interweavements may create channels for diffusion.

II. National Factors

By focusing on national factors we can give an answer to the question: Why do some countries adopt policy innovations earlier than others? The research focus, here, is on endogenous variables which may account for the propensity and national capacity to adopt environmental innovations.

III. Characteristics of the policy innovation

Characteristics of the policy innovation have to be taken into account when answering the question: Why do some policy innovations spread more quickly than others?

In the following these groups of factors are described in more detail.

2.1 Dynamics of the International System

Economic, political and societal interlinkages between nation states offer channels for the transfer of policies across countries. These channels differ with regard to the dominant mechanism by which policy transfer occurs.

Economic interlinkages are often perceived to create a pressure to modify regulatory policies in order to sustain or improve national competitiveness in a global economy. However, while the theoretical prediction of a downwards convergence often lacks empirical evidence (Vogel 1997, WTO 1999, Drezner 2001) the assumption that regulatory competition[3] sets incentives to adopt

2 See for example Gray 1973; Rose 1991, 1993; Bennett 1991; Bennett and Howlett 1992; Dolowitz and Marsh 1996, 2000; Stone 1999; Kern 2000; Kern, Jörgens and Jänicke 2001a.

3 The term regulatory competition is used in the following notion: Regulatory competition represents the political dimension of economic integration and trade liberalisation. Different jurisdictions are pressured to compete with each other by adopting policies which ensure competitive advantages or at least avoid competitive disadvantages of domestic firms. In contrast, regulatory competition as de-

innovative measures at an early stage in order to gain ”first mover advantages” (Porter and van der Linde 1995) has not been able to identify the necessary conditions for anticipating these prospective advantages which – according to the “Porter-Hypothesis” basically motivate the pioneer policy.

First mover advantages of institutional (Heritier et al. 1996)[4] or economic nature (Porter and van der Linde 1995) can be stated *only after* the political or technological innovations had diffused beyond the national context where they were initiated. Yet, diffusion is not an automatic process. A theoretical prediction of policy convergence driven by a “race to the top”-competition between nation states has to consider a number of dynamics of globalisation.

First of all, the degree of vertical integration in the international system, or, in other words, the existence of trans-national communication channels, is crucial for the course of policy diffusion (Kern 2000: 167). Their existence increases the prospects of policy diffusion. Communication has to be seen as the fundamental mechanism of diffusion as innovations must be communicated in order to diffuse.[5] The increasing globalisation of communication via international organisations, transnational advocacy coalitions or global scientific discourse offers channels for the diffusion of knowledge, best practice, perceptions of problems or the creation of common needs and beliefs.

John Meyer et al. (1997b) have pointed out that the global spread of environmental discourse and organisation – apart from the central role of non-governmental actors– was especially stimulated by the development of the United Nations (UN). The rise of this organisational system, with an agenda broad enough to include environmental issues, in conjunction with a more scientific perception of nature is considered as being the main driving force for the development of what has been labelled as World Environmental Regime.[6] One of the first clearly visible results of international organisation and discourse in the environmental field was the first UN Con-

scribed by Adrienne Héritier (1996) is concerned with the competition between European Union (EU) member states to transfer their policies, administrative models or approaches to the EU-level, in order to avoid significant adjustment cost at a later point in time. The distinction between both concepts is, that the latter regulatory competition takes place in the shadow of a supranational integration instance (European Commission, EC) and a prospect for an intergovernmental policy output, whereas the former is lacking similar political conditions.

4 The argument of administrative first mover advantages (Heritier et al. 1996) is mainly restricted in its application on the EU context, where the anticipation of a common regulation is significantly higher than at the global level, because vertical diffusion may result in cross-national policy making at intergovernmental level.

5 One of the original roots of diffusion research was the communication research (Roger 1962). Communication courses through the structures of a social system. Therefore, uncovering social/interactive structures between states can be useful in order to identify the courses diffusion will go and/or the motivations of policy-makers to adopt similar policies. The insight of sociologist research on organisational conformity mechanisms, network-analytical findings of structural equivalence or asymmetric relationships, which foster homogeneity, may be fruitful for political scientist too (See Friedkin 1984, DiMaggio and Powell 1991, Strang and Soule 1998).

6 This term describes ”(...) a partially integrated collection of world-level organizations, understandings and assumptions that specify the relationship of human society to nature" (Meyer et al. 1997: 623).

ference on Environment in Stockholm 1972[7], which in many countries set the agenda for the development of environmental policy as a distinct policy area (Jörgens 1996).

Apart from the UN, a large number of international organisations such as the World Bank or the OECD have placed environmental issues on their agenda and have been influential in the international dissemination of ideas, approaches, problem perceptions and concrete policy measures in this policy field. Furthermore, specific environmental networks exist, like the International Council of Local Environmental Initiatives, the Global Eco-labelling Network or the International Network of Green Planners as well as various networks of environmental non-governmental organisations (NGO) like Friends of the Earth, the European Environmental Bureau, the World Wildlife Fund, and Greenpeace (Kern, Jörgens and Jänicke 2001: 9). They all communicate and disseminate ideas, approaches and practices. Undoubtedly, they differ in power, resources, strategies and aims. Besides disseminating information, some international organisations, for example the International Monetary Fund or the World Bank, are able to enforce adjustments by using the lever of asymmetric power relations or structural dependencies.[8] In contrast, NGOs and scientific communities provide and disseminate knowledge in order to change perception – their main modus of communication is "persuasion" (Keck and Sikkink 1999, Stone 2000).

Finally, a number of international institutions exist which are not created in order to solve collective-action problems (Martin and Simmons 1998, Botcheva and Martin 2001). Those "aspirational" institutions are weak international agreements without enforcement mechanisms, instead they set goals and standards for its member states and "...work through a long process of persuasion to encourage movement toward these standards" (Botcheva and Martin 2001: 12). Moreover, these aspirational institutions "typically…reflect the agenda-setting power of ambitious, well organized private actors. It therefore seems empirically accurate that aspirational institutions adopt 'high' standards of behaviour, since these groups hope to use the persuasive power of institutions to 'improve' the practices of states."(ibd. 13).

The "Toronto goal" of 20% reduction of CO_2 emissions of 1988 levels by the year 2005, formulated in the final statement of the Tontonto Conference on "Our Changing Atmosphere" is a striking example for such an "aspirational institution". The process of formulating this numeric goal was mainly pushed forward by the NGO community and considerably facilitated by the Prime Ministers of Norway and Canada, Gro Harlem Brundtland and Brian Mulroney, which both called for a global convention on climate change. The Toronto goal, although only a recommendation, stimulated not only public attention to the climate issue, but also national goal setting processes as in Germany in 1990 (25%) and political efforts to tackle the climate change problem by the development of national climate policies in the Netherlands, Germany, Canada and Norway in the early 1990s (see Social Learning Group 2001; Kasa 1999).

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7 A clear effect of this international institutionalisation of the environmental issue was that the conference animated 7 countries to join the already in 1958 passed Convention on Fishing and Conservation of the Living Resources of the High Seas (Meyer et al. 1997: 633). Furthermore, in a time frame of three years surrounding the Stockholm Conference, 9 countries established environmental ministries (1970: United Kingdom, 1971: Australia, France, Canada and the Netherlands, 1972: Denmark, Austria, Norway and the German Democratic Republic).

8 Compare Dolowitz and Marsh (2000) who have developed a continuum of types of policy transfer ranging from voluntariness to coercion.

The observable effects of „persuasive power" indicate that there is another source of convergence which is more ideational by its nature "…states alter institutions and regulations because of a set of beliefs has developed sufficient normative power that leaders fear looking like laggards if they do not adopt similar policies" (Drezner 2001: 57).

These competitive dynamics are utilized and forced by the activities of certain international organisations like the OECD, or the UN. They systematically spur on "benchmarking" by comparing regularly national performances in specific issue areas like environment or education. Referring their provided information to a mutually agreed target (aspiration, norm) serves as instrument "in the exercise of 'shaming' and peer pressure" (Botcheva and Martin 2001: 15).

Those instrumental benchmarking activities in the shadow of "aspirational institutions" or quasi-regimes (Ruggie 1983)[9] which are pursued not only by international organisations but increasingly by transnational non-state actors facilitate national adoptions of policy innovations practiced in other countries or modelled on international promoted "best practices".

Normative or ideational pressure for convergence, therefore, may result from the observation that "states are embedded in dense networks of transnational and international social relations that shape their perceptions of the world and their role in that world" (Finnemore 1996a: 2). States or organisations do not only compete for resources but also for verifying their legitimacy (Di Maggio and Powell 1991: 66, Finnemore and Sikkink 1998: 902) as members of a global community in which they are socialized (Finnemore 1996a, Meyer et al.1997a, Katzenstein et al. 1998).

To sum up we can distinguish two main driving mechanisms of diffusion of innovative policy measures rooting in the growing economic and political-institutional interlinkages between nation states.

Regulatory competition which may under certain circumstances lead to an upward convergence instead of the theoretically predicted "race to the bottom" (Scharpf 1999: 83). National policy makers may be forced by considerations of competitiveness to adopt the innovative policy measures of pioneers in order to avoid significant economic or administrative adjustment costs (Héritier et al. 1996; Vogel 1997, Jänicke and Weidner 1997a; Kern, Jörgens and Jänicke 2001: 4-5). Pioneer behaviour in turn may be triggered by the same considerations, i.e. the expected global spread of political and/or technological innovations introduced by these countries. This expectation that innovations introduced by pioneer countries will subsequently be adopted by other countries is supported by the existence of a second competitive dynamic of the international system:

Ideational competition which may become the driving force of policy emulation as a consequence of the establishment of environmental protection as an internationally accepted and shared norm. This may result in "bandwagoning" effects (Ikenberry 1990) or "norm-cascades" (Finnemore and Sikkink 1998), where nation states cannot longer resist adopting certain meas-

9 Ruggie (1983) describes quasi-regimes as negotiated international agreements on aspirations rather than commitments and with few or weak compliance mechanisms (quotation in: Botcheva and Martin 2001:15).

ures, aims or strategies – without threatening their image as legitimate members of an environmentally responsible family of the global society.[10]

2.2 National Capacities for Adopting Innovative Environmental Policy Measures

At the national level the specific political, economic, societal and institutional capacities of countries influence the demand for and the feasibility of policy innovations (Kern, Jörgens and Jänicke 2001: 8). Similarly, endogenous problem perceptions and the power of pressure groups or the public opinion have an effect on the demand for new solutions.

Scholars of International Relations ascribe those domestic factors contrary weights when accounting for the effects of international institutions/organisations which promote knowledge, goal and ideas. As diffusion research is interested in the effects of exactly those institutions or organisations which engage in the "idea game"[11] (Marcussen 2001) this seemingly theoretical contradiction requires attention. Botcheva and Martin (2001) argue that cross-country variations in existence, organisation and access chances of domestic pressure groups may vary the effects on state behaviour of so called international "aspirational institutions". In countries where well organised interest groups and adequate access chances exist those aspirational institutions matter, because these groups may use the international norm for generating pressure on their governments for policy change (13). In countries without these groups advocating the issue promoted by the international institutions they will not matter. In contrast, Finnemore and Sikkink (1998) concluded from empirical studies, that states may adopt policies even though they face no *domestic* pressure to do so. Instead, international dynamics will become dominant at the tipping point, "… when enough states and enough critical states endorse the new norm to redefine appropriate behaviour for the identity called 'state' or some subset of states" (902).

The expected divergence effect of institutions on state behaviour suggested by Botcheva and Martin (2001) and the expected convergence effect of similar institutions suggested by Finnemore and Sikkink (1998) accompanied with a different weighting of domestic factors are in fact not mutually exclusive, they only reveal differences in the kind of effects they intend to investigate and consequently in the conceptualisation of the term "convergence". The former look at state *compliance* with international "soft" agreements and discover divergent policy *outcomes*. The latter focus on international *dynamics* which cause convergent national policy *adoptions*. Yet, focussing on policy adoptions only does not allow to distinguish between "deep" and "superficial" policy adoptions, meaning adoptions which are largely symbolic or involve extensive commitment of resources (Berry and Berry 1999: 189). We argue that this distinction will become relevant in another stage of research which goes far beyond the original focus of diffusion research and focuses on the governance potential of diffusion by investigating outcomes

10 For this argument and related approaches of sociological institutionalism or the world-society approach see for example Ruggie 1998, Katzenstein et al. 1998, Schimmelfennig 1998.

11 "The idea game being about formulating, transferring, selling and teaching, not formal regulation, but principled or causal beliefs helping to constrain or enable certain types of social behaviour…" (Marcussen 2001: 3).

and impacts of what diffused (Jörgens 2001: 125)[12]. The clue we can draw, is that we can expect domestic factors to play a significant role for policy adoptions at least in the early stage of the diffusion process[13], but not necessarily for each policy adoption at the global scale during the whole process as they may be overarched by international norm dynamics.

Among national factors, attention has especially been directed to administrative traditions, regulative structures and policy styles and the legacy of past policies. The perceived administrative implications of adopting new policy-approaches or instruments are often seen as essential factors influencing the decision to adopt or reject policy innovations already in practice in other countries.[14] This emphasis on "administrative fit" or the "logic of appropriateness" (March and Olsen 1989) is based on the general assumption "that institutionally grown structures and routines prevent easy adaptation to exogenous pressure" (Knill and Lenschow 1998: 2). Sometimes they are emphasised as forces promoting divergence (Hoberg 2001b: 127, Jordan 2001: 20). We argue that national institutional arrangements function as filters to the adoption of innovative measures (Kern, Jörgens and Jänicke 2001). They may delay or prevent the adoption of path-deviant policies. But mainly they will be responsible for variations in the degree of convergence ranging from policy similarities with respect to policy ideas and approaches, the utilization of certain policy instruments or the qualitative level of policy regulations. Therefore, we argue that a global convergence of policies will never exclude divergent national adaptations as "…we would never expect a programme to transfer from government to another without history, culture and institutions being taken into account" (Rose 1991: 21).

To sum up, we consider national factors as being crucial for answering the question why nation states adopt policy innovations at an earlier stage, at a later stage or even resist an adoption. Furthermore, they help explaining national variations in the policy innovations' design.

2.3 Characteristics of Specific Policy Innovations

Finally, the specific characteristics of the policy innovation itself have to be taken into account. Surprisingly, studies on policy diffusion and policy transfer often tend to systematically ignore this group of factors (Rogers 1962/1995: 204; Dolowitz and Marsh 2000: 3). Nevertheless,

12 An interesting study of Kern et al. (2001b) pursues this approach focussing not only on factors influencing policy adoptions but also factors which cause success or failure of diffusion. Kern et al. state that „While the global diffusion of policy innovations is strongly influenced by global transfer institutions, national policy change and national performance is primarily determined by national factors" (ibid.: 2).

13 Considering that policy innovations often are very flexible by their nature and therefore not necessarily an invariant quality during the whole diffusion process (Rogers 1962/95: 17), a high probability of re-invention in later stages of the diffusion process reveals the vulnerability of this argument, that domestic factors in general lose their importance for motivating adoptions in later stages of the diffusion process (Finnemore and Sikkink 1998). The empirical studies from which they draw their conclusions were concerned with the spread of relatively inflexible innovations such as the women's suffrage or bans of land mine use.

14 The administrative implications of supranational or intergovernmental policy-outputs are especially elaborated within the context of European integration. This approach which pronounces challenges of administrative convergence finds its expression also in the so called "regulative competition-hypothesis" between member states, which assumes that states are forced to adopt forerunner-strategies in order to avoid significant adjustment costs caused by a late adoption. (Heritier et al. 1996; Andersen and Liefferink 1997).

comparative studies show that the speed and pattern of policy diffusion vary according to the specific features of policy innovations (Bennett 1997; Burke 1999; Jänicke and Weidner 1997a; Jänicke and Jörgens 1998; Kern, Jörgens and Jänicke 2001). Bennett even concludes "…that the major variable to consider when assessing the diffusion of an innovation is the inherent properties of the issue."(1997: 229; see also Rogers 1995: 204).

The innovation characteristics listed by Rogers are mainly drawn from diffusion studies on technological innovations (Rogers 1995: 244) and include attributions to these innovations by potential *individual* adopters (ibid.: 208). Dealing with policy innovations is much more challenging with respect to a suitable definition of innovation characteristics. A policy innovation has to pass through a whole policy cycle. At each stage of this cycle the innovation decision process can break off, due to the underlying problem structure or problems of technical or political feasibility (Rose 1991: 25).

To sum up the findings from the literature we argue that certain properties of a policy innovation may influence its "diffusability" (ability to diffuse). These properties can be divided into three categories:

- the underlying problem structure;
- political feasibility; and
- compatibility (technical feasibility).

It will be difficult to find general items for these raw categories without considering heterogeneous national contexts, which can significantly influence the technical and political feasibility of policy innovations. We are aware that the administrative implications of policy innovations pose distinct adaptation challenges to heterogeneous national regulatory styles and structures and logics (Knill and Lenschow 1998: 4). However, we intend to define minimum criteria to generalise properties of policy innovations relevant for the rate of adoption in the international system.

The underlying problem structure of a policy can be described in terms of

- the ease of agenda placement due to visibility of a policy problem and the subsequent public pressure to solve the problem,
- the power of the relevant target groups to keep a political issue off the political agenda or to oppose new or stricter regulations, and
- the availability of technical options to solve the problem (Jänicke, Kunig and Stitzel 1999: 82).

In cases where the problem structure is unfavourable, the diffusion of policy innovations may be significantly hindered. Empirically, it has been observed that policies related to problems of long term degeneration, whose effects are not directly visible and which, therefore, cannot easily be placed on the political agenda, diffuse rather slowly, if at all. The same can be said about problems where standard technical solutions do not apply, such as land-use, groundwater pollution or loss of biodiversity (Kern, Jörgens and Jänicke, 2001; Jänicke and Weidner 1997a; Jänicke and Jörgens 2000: 612-613). However, the usefulness of this category is limited to those innovations which address environmental problems directly. In contrast to traditional environmental legislation, focusing on media-related environmental problems like air, soil or water protection, a large part of environmental policy innovations is not designed to address environmental problems directly. Instead, environmental institutions, strategies and instruments are often aimed at improving the effectiveness of the political management capacities for environmental protection.

With regard to the compatibility of policy innovations with existing regulatory styles and structures, it is likely that the extent of policy change induced by a regulatory innovation is decisive for its diffusion. Considering the filtering effect of national institutions mentioned above, it can be assumed that the innovation's ability to diffuse will depend on how easily it can pass through these filters. For example, it is easier to create a separate environmental ministry than to effectively integrate environmental concerns into the decisions of all relevant ministries. The spread of innovations inducing only an incremental change and which can easily be added to existing structures can be expected to be faster than the spread of innovations which are in conflict with traditional regulative structures and policy styles (Kern, Jörgens and Jänicke 2001: 11-13).

Furthermore, the political feasibility of an innovation depends on its potential to provoke conflicts with powerful actor groups (Kern, Jörgens and Jänicke 2001: 24). Especially the fiscal effects of policy instruments are crucial for evaluating the potential of conflict induced by the innovation. Redistributive policies which affect powerful interests, especially those who are internationally mobile are less likely to diffuse rapidly. Therefore, the exposure of the policy innovation to regulatory competition can be characterised as a raw criteria for the prospect of its rate of adoption. A more sophisticated distinction of policy innovations exposed to regulatory competition states that the political feasibility depends on whether the underlying economic competition concerns the quality of products or costs of production which cannot be transformed into product qualities (Scharpf 1999). Regulative measure which affect product qualities in terms of lower consumption and production externalities may result in competitive advantages of domestic producers on international market for high quality goods – the so called "certification effect" of national regulative measures (ibid. 8) may foster the diffusion of the respective policy innovation.

In the following section, the aptness of these factors for explaining the diffusion of concrete environmental policy innovations will be illustrated on the basis of four empirical examples of new environmental policy instruments: national environmental policy plans and strategies for sustainable development, eco-labels, energy/carbon taxes, and legal provisions on the free access to (environmental) information.

3. The Global Spread of New Environmental Approaches and Instruments – Four Examples

Although the theoretical assumption of a greater effectiveness and efficiency of new environmental policy instruments – as compared to traditional command-and-control regulation – has not yet been proven by empirical research[15], NEPIs are increasingly adopted across all industrialised countries (see figures 2 and 3-6). As these cumulative adoptions of softer and more flexible regulation cannot be adequately explained by a greater effectiveness or efficiency of NEPIs, additional explanatory factors have to be taken into account.

15 For a critical assessment of NEPIs see for example Knill and Lenschow (2000) who in a comparative empirical study conclude that the use of new environmental policy instruments did not lead to more effective implementation: New environmental policy instruments "(…) do not perform significantly better than policies in line with the traditional top-down approach" (Knill and Lenschow 2000: 252).

We will argue that the motivation of national policymakers to adopt NEPIs is to an important extent influenced by the increasing vertical integration of the international system and intensification of the efforts of international organisations to actively promote new approaches, ideas, aims and instruments in the field of environmental policy.

3.1 National Environmental Policy Plans and Strategies for Sustainable Development

3.1.1 Innovation Profile

National environmental policy plans and strategies for sustainable development are governmental action plans adopted by means of a cabinet and/or parliamentary decision. They are drawn up with broad public participation and set long-term environmental policy goals and priorities across media and sectors. Strategic environmental planning represents an important shift from a strongly fragmented, primarily medium-oriented and instrumental environmental policy towards an integrated strategy guided by long-term goals (Jänicke and Jörgens 1998). National environmental policy plans and strategies for sustainable development are among the most important attempts to implement the Agenda 21 sustainable development model at the national level (Meadowcroft 2000). Their main characteristics are (Jänicke and Jörgens 1998; 2000):

- consensual long-term environmental goal-setting (consensus);
- deriving goals from the principle of sustainability;
- including all relevant policy areas (policy integration);
- involving agents/polluters in problem-solving (agent involvement);
- involving major, different interests in goal and policy formulation (participation) and
- mandatory reporting on goal implementation (monitoring).

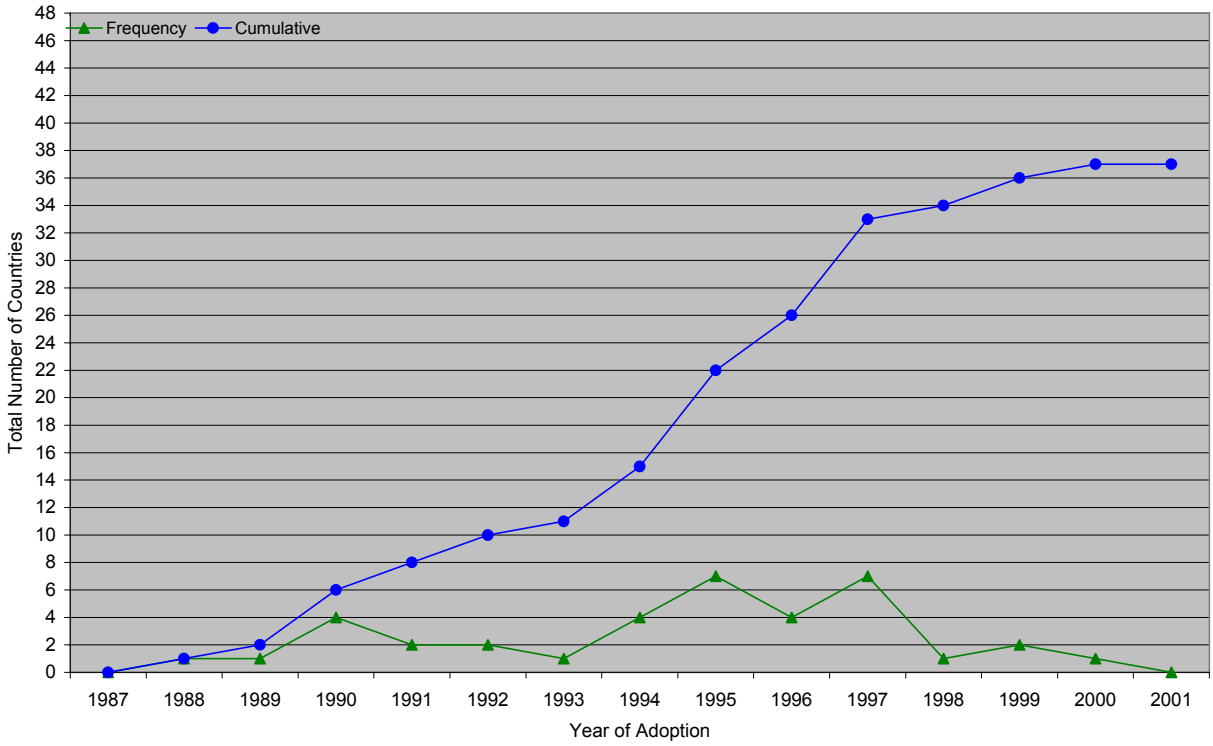
3.1.2 The Profile of Spread

The approach of strategic, goal-oriented environmental planning has spread very rapidly since the 1980s in industrial countries, but also in newly industrialised and developing countries. Within a decade of the adoption of the first national environmental policy plan in Denmark (1988) and the Netherlands (1989), almost two-thirds of OECD countries and about 80% of the more developed CEE countries had adopted national environmental policy plans (Jänicke and Jörgens 2000: 614-616). Although there are marked differences in these plans as regards both the relevance and specificity of goals (Jänicke, Carius and Jörgens 1997), all are based on the model of targeted, cross-media and – at least in intention – participatory environmental planning.

The diffusion curve (figure 3) shows a sharp rise beginning in the end of the 1980s. A number of factors have influenced the relatively rapid worldwide spread of this policy innovation. Although domestic impetus for strategic planning was apparent in certain countries, like in the Netherlands or the United Kingdom, international processes, like the Brundtland Report (1987) or the Agenda 21 (1992) were most influential and accelerated national developments (Jänicke, Carius and Jörgens 1997). Probably the most important international event was the 1992 UN Conference on Environment and Development in Rio de Janeiro and the action plan adopted there, Agenda 21, which called on all signatory states to formulate a “national strategy of sustainable

tainable development". In 1997, at the special session of the UN assembly in New York, this resolution was confirmed and a 2002 deadline was set for developing national strategies for sustainable development (Kern, Jörgens and Jänicke 2001: 18). Additionally, since 1992 the OECD has systematically included the existence or non-existence of a comprehensive environmental plan among its criteria for assessing the environmental performance of its member states, sometimes connected with emphatic recommendations for "laggards".[16]

Figure 3: Spread of National Environmental Policy Plans and Strategies for Sustainable Development in OECD-Countries and Central and Eastern Europe



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Besides these international driving forces, a number of national or regional activities also affected the international diffusion of national environmental policy plans. The most prominent example certainly is the Dutch Environmental Policy Plan of 1989 which served as a model for similar initiatives in many other European countries as well as for the European Union's Fifth Environmental Action Programme. Furthermore, the environmental organisation Friends of the Earth has presented its own draft strategy for sustainable development for the Netherlands, the European Union (EU) and for Germany (Jänicke, Jörgens and Koll 2000: 221-222).

16 The recent Environmental Performance Review for Germany from 2001 states in emphasized cursive letters: "Germany does not yet have an agreed national strategy for promoting sustainable development" (OECD 2001b: 109). Furthermore, since 1998 on the demand of the member states' ministers the OECD strengthens its efforts to support sustainable development. Within the organisation an separate organisational division was created – OECD Sustainable Development. It intends to promote sustainable development among its member states. Only recently the OECD published assessment reports on the progress of formulation and or implementation of national strategies for sustainable development in Canada, Germany and the United Kingdom (http://www.oecd.org/oecd/pages/home/-displaygeneral/0,3380,EN-about-21-nodirectorate-no-no-no-21,FF.html).

For transitional countries of CEE the Polish "National Environmental Policy" adopted in 1991 had comparable model-character (OECD 1995b: 104) like the Dutch plan for the more developed and wealthier countries. The Environment for Europe process decisively stipulated the development of national environmental policy plans in that region. At the first ministerial meeting in Dobris 1991 the decision was passed to develop an Environmental Action Plan for CEE. A task force managed by the OECD and the World Bank drafted this plan, which was passed at the 2nd conference in Lucerne in 1993. This Environmental Action Programme constituted the blueprint for the development of Nation Environmental Action Plans in the region. 16 countries from the region – assisted by the OECD – have since developed such a programme or are in the process of doing so (OECD 1998: 7). Finally, the International Network of Green Planners a worldwide discussion forum and information exchange has contributed much to the spread of strategic environmental planning (http://www.ingp.org).

Overall, it can be said that while only in a few countries (such as the Netherlands) strategic environmental planning has led to the introduction of thoroughly new and ambitious environmental policy goals or far-reaching changes in the administrative organisation of environmental policy, in the majority of cases such plans have been developed without drastic consequences for existing environmental policy (Jänicke and Jörgens 1998). The development of national environmental policy plans has thus been a largely additive process (Kern Jörgens and Jänicke 2001: 19).

3.2 Eco-labels

3.2.1 Innovation Profile

Eco-labeling can be defined as "the practice of labeling products based on a wide range of environmental considerations" in order to make relevant environmental information available to the consumers (EPA 1998: 5). Eco-labels enable consumers to include environmental aspects as criteria in their purchasing decisions. Indirectly, environmental labeling may also affect producers as they design products that have to compete not only with respect to price and quality, but also to some extent with respect to environmental attributes (EPA 1998: 5).

Two basic types of eco-labels can be distinguished. The first type concerns labelling schemes relying predominantly on first-party-verification (i.e. created by individual producers in order to point out the positive environmental attributes of their products). This type of eco-labels will not be addressed in our study. The second type concerns labeling systems where verification is carried out by an independent body that awards labels to products based on a mandatory fixed set of criteria or standards (EPA 1998: 9). Furthermore, positive, neutral and negative eco-labeling schemes can be distinguished. While positive programmes usually point out one or more environmentally preferable product characteristics, negative programmes warn consumers about harmful components of products. Neutral programmes also provide environmental data, but leave the interpretation up to the consumer (EPA 1998: 9).

Another distinction concerns the mandatory or voluntary character of eco-labeling programmes. While mandatory labels usually warn about possible hazards and have to be applied by all producers of a certain type of product, voluntary labels are usually positive or neutral in nature and it is up to producers to decide whether they want to participate. Finally, eco-labeling schemes

can vary according to the number of product groups which they cover (e.g. energy labels applying only to electronic appliances or general eco-labels covering potentially all product categories).

In the following we will focus on the spread of nation-wide voluntary eco-labeling schemes relying on third-party-verification, using a mandatory set of criteria and which are not limited to one or few product groups.

3.2.2 The Profile of Spread

The first country to introduce a national eco-labeling programme was Germany. Although the German "Blue Angel" of 1978 has certainly served as a model for the development of similar initiatives in other countries and in the EU, it was not until 1988 that Canada followed the lead by introducing its own national eco-label “Canada’s Environmental Choice”. A first marked rise in the curve occurred in 1989 when four Scandinavian countries adopted the multinational eco-label “Nordic Swan” and Japan and the U.S. developed their own national programmes. While most of eco-labeling programmes are public policies the US “Green Seal” in contrast is not a government associated programme but privately funded and directed by a national non-profit organisation (OECD 1997: 27).

The international spread of eco-labeling programmes accelerated even further when in 1992 the Council of Ministers of the EU adopted a regulation introducing the “European Flower” as an EU-wide eco-label (Council Regulation (EEC) No 880/92).[17]

In a very short period from 1988 to 1992 there has thus been a rapid spread of this new environmental policy instrument which has been driven mainly by regional co-operation within the Nordic Council and in the EU. This spread can only to some extent be classified as diffusion. The process leading to the development of the “European Flower” can be characterised as a vertical and “bottom-up”-driven diffusion mechanism (Kern et al., 2001)[18]. The European eco-label was strongly inspired by already existing European national eco-labeling programmes as for example the German, French (1991) and the Austrian (1991) eco-label as well as by the multi-national “Nordic Swan” (see Landmann 1998: 113). But the introduction of the EU-eco-label transforms the vertical diffusion process into the development and application of supranational law. Policymaking within the EU rather has to be described as a specific case of multi-level governance (e.g. Scharpf 1993, 1994; Jachtenfuchs and Kohler-Koch 1996) where processes of policy diffusion mingle with supranational decision-making.

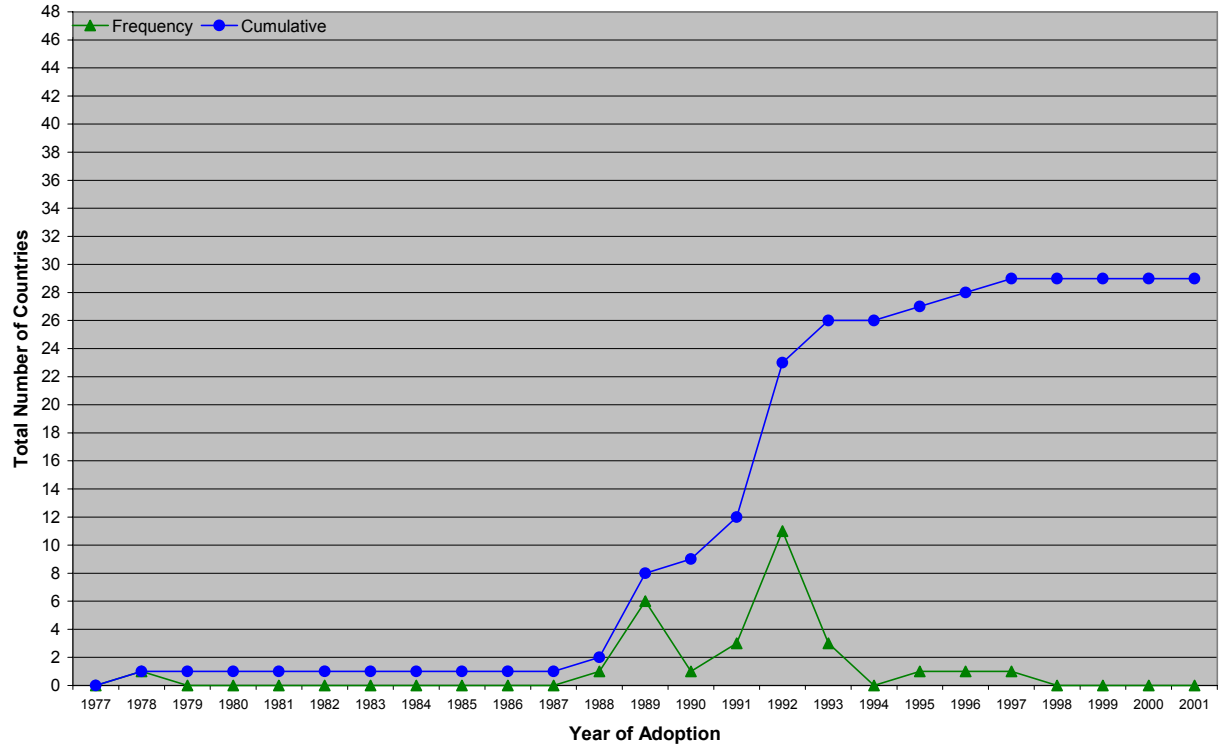
While most European countries refrained from introducing their own national eco-labels and limited themselves to implementing the European Council regulation, the development of national

17 The EU Ecolabel is run by the EC and administered by competent bodies in all member states as well as Norway and Iceland (EPA 1998: B-31). Product groups are chosen and criteria are developed by the EC in close collaboration with the Committee of Competent Bodies as well as stakeholder organisations. Ecolabels are awarded by the competent bodies within their country. National Authorities are in charge of monitoring that ecolabels are properly used. The EU-wide ecolabeling procedure does not replace national ecolabeling programmes and the "Nordic Swan" which continue to exist.

18 Vertical policy diffusion is a likely phenomenon in multi-level-systems, as for example the USA or the EU. Vertical bottom up diffusion characterises the transfer of a policy innovation from the national (or sub-national) level to the superior policy-level (Kern 1998: 3).

eco-labeling programmes proceeded worldwide. Outside the EU, national eco-label programmes were adopted in New Zealand (1990), Australia (1991), Korea (1992), Croatia, Czech Republic, Hungaria (1993), Lithuania (1995), Slovakia (1996) and Latvia (1997). But also two EU-member states (Netherlands 1992, Spain 1993) introduced an own national label in addition to the existing supra-national label. The development and adoption of eco-labels in CEE countries was partly influenced by consulting services of the German Federal Agency of the Environment, organising workshops for CEE countries as guidance for the development of eco-labeling programmes in that region and promoting the German Blue Angel (See Landmann 1998: 101).

Figure 4: Spread of Eco-labels in OECD-Countries and Central and Eastern Europe



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Summarising, at the end of the year 2000 eco-labeling programmes are in place in 23 OECD member countries and 6 CEE countries. However, due to the significant differences between national eco-labeling programmes, there is a considerable need for international harmonisation. On this background, international organisations and networks – like the issue-specific "Global Eco-labeling Network", founded in 1994, or the International Standard Organisation (ISO) as well as the OECD and the UNEP (UN Environment Programme) – which were hardly involved in the initial spread of eco-labels, increasingly try to become a part in the process. Their efforts are especially directed at an international harmonisation of eco-labels (Kern, Jörgens and Jänicke 2000: 526) and/or their mutual recognition (UN Commission on Sustainable Development 1995: 6-8).

3.3 Energy/Carbon Taxes

3.3.1 Innovation Profile

Energy/carbon Taxes are market-based environmental instruments, which tax the use of energy. By increasing the market price for energy they intend to set incentives for energy savings and in some cases the increase of energy production from renewable sources. The overarching goal of energy-related taxes refers to climate change prevention by reducing CO_2 emissions from the use of fossil fuel in energy production and transport. Existing tax models differ with respect to the tax base, which either can be related to the carbon content and/or energy content of fossil fuels or related to the final consumption of energy products, respectively a combination of both approaches. Being aware of the fact that different tax bases may influence the ecological outcome (OECD 2001:59), we decided, however, to concentrate (in the first run) on the diffusion of the general approach to tax energy use which is ecologically motivated and aims at climate protection and reduction of CO_2-emissions.

3.3.2 The Profile of Spread

In 1990, the first country to introduce a carbon tax on fossil fuels was Finland. However, Finland "… has hardly perceived itself as a 'good example' that other countries could learn from" (Andersen and Liefferink 1997: 25). It was followed by Norway (1991), Sweden (1991), Denmark (1992) and the Netherlands (1992). The nearly simultaneous policy adoptions in the Scandinavian countries had been co-ordinated by the Nordic Council. Once again and like in the case of Eco-labels (see above), this regional association facilitated and co-ordinated the national adoption and implementation.

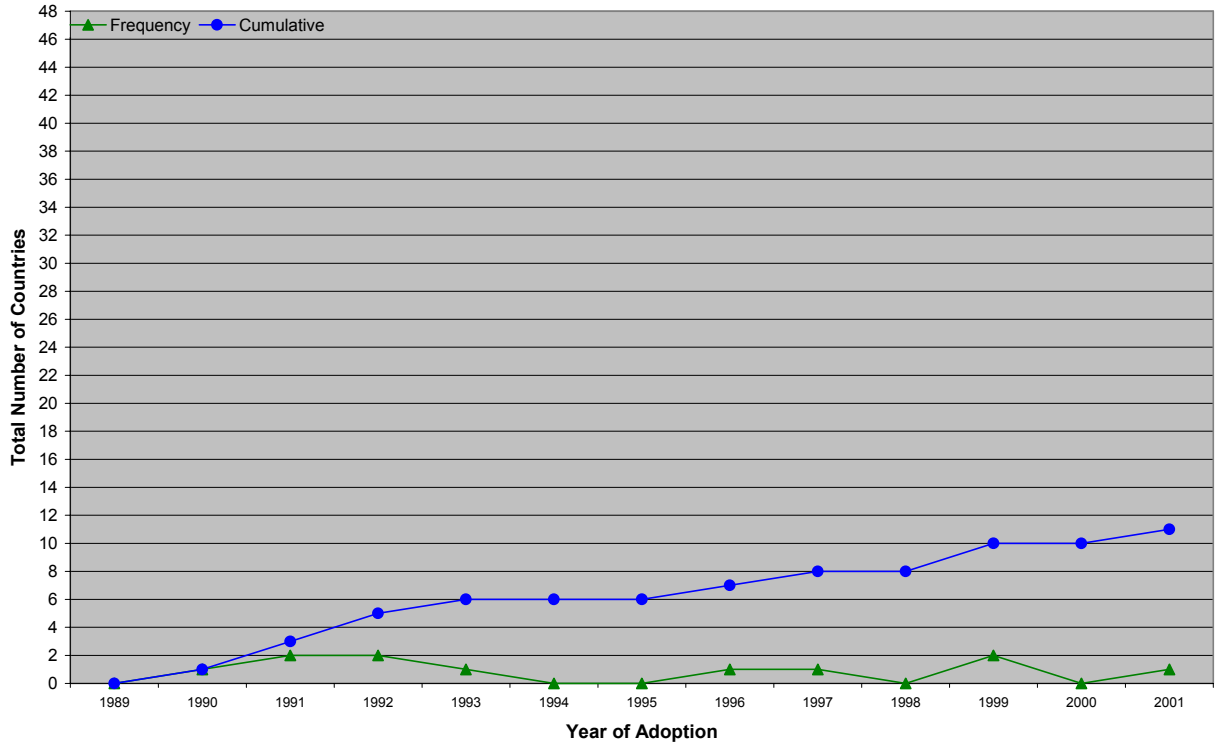
The discussion surrounding the European Commission's proposal to introduce a common energy/carbon tax in 1992 (KOM (92) 226, 30.06.1992) accelerated at least three of these national carbon tax adoptions. Denmark pursued a pusher by example strategy (Liefferink and Andersen 1998) and unilaterally introduced a national energy/carbon tax in order to influence European policy-making. In July 1992, the Netherlands introduced an energy/carbon tax modelled on the European Commission (EC) proposal (Schlegelmilch 1999: 19). Considering the early efforts (1988 fuel charge) and later developments (1996 regulating energy tax) "the Netherlands provide an interesting example of progressive transformation of earmarked charges into unrequited taxes" (Barde 1999: 34). Sweden – at that time not a member of the EU – introduced a national carbon tax with the intention to set an example soon to be followed by other countries. This combination of domestic policy innovation and international leadership has a certain tradition in the Swedish environmental pioneer strategy (Andersen and Liefferink 1997: 22).

This first wave of energy/carbon tax adoptions in the early 90s can be ascribed to pusher strategies of typical European pioneer countries, which adopt innovative policies at the national level as examples to be followed by other countries or in order to accelerate international policy development.

As the curve in figure 5 illustrates, the spread of energy/carbon taxes slowed down significantly after this first wave of diffusion. However, at the same time information transfer at the international level increased and was essentially stimulated by benchmarking activities of the OECD (OECD 1993, 1995a, 1999, 2001a) and the European Environment Agency (EEA 1996, 2000).

Both organisations increasingly promote energy/carbon taxes within the context of broader green tax reforms. With the adoptions of energy taxes in Germany and Italy 1999 and the introduction of the British Climate Change Levy in 2001 three influential countries[19] have recently adopted this policy innovation. Therefore, a critical mass of adopters could soon be reached, which in turn could lead to a renewed acceleration of the diffusion process.

Figure 5: Spread of Energy/Carbon Taxes in OECD-Countries and Central and Eastern Europe



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The diffusion of energy/carbon taxes as shown in figure 5 is interesting for a number of reasons. First, it is worth noting that, despite demands raised back in the 1970s (Baumol and Oates 1989; Hohmeyer 1995), comprehensive taxes on energy over and above charges on mineral oil were imposed only from 1990. Since the beginning of the 1980s, a comprehensive ecological tax reform had come under increasing discussion (Koschel and Weinreich 1995: 10). Despite a generally favourable estimate in the literature of their potential, it was not until the international climate protection debate, which put pressure on countries to markedly reduce CO_2 emissions, that green taxes, especially carbon and energy taxes, gained in importance in environmental policy practice as well. This time lag between demand and reality is apparent throughout the en-

19 The planned extension of the French General Tax on Pollution to a taxation for energy use by industry to take effect January 1, 2001, was rejected by the French Constitutional Court. The proposal was judged to be “contrary to the principle of equality”, because it would tax different energy users differently. The second count for rejection was that an application of the energy tax fell beyond the state’s aim to reduce greenhouse gas emissions because electricity in France comes primarily from nuclear power (CSE 2001, No 2). However, not only the former Minister for environment, Dominique Voynet, but also the new one, Yves Cochet, continue efforts for extend the General Tax on Pollution, as it is a basic requirement of the Green’s participation in the French coalition government (CSE 2001, No. 2, No. 4).

tire field of market-based instruments in environmental protection (Jänicke and Weidner 1997a, 1997b; Zittel 1996). The introduction of effective economic instruments regularly fails where powerful, well-organised economic interests are the potential losers of such a strategy. This is particularly so in the key application fields for eco-taxes, energy and transport (Mez 1998). Most of the policy analysis confirms these observations and assumes that redistributive policies are difficult to implement. It is also striking that – following the joint front-runner policy of the Nordic countries – apart of Slovenia (1997) only wealthy northern and western European states have so far begun introducing energy/carbon taxes.

Taxes "…imposed on products or key factors of production, where the goods are traded widely in the international market" (OECD 2001a: 72) are exposed to regulatory competition. Competitiveness concerns in the most affected sectors are the key issue of opposition to the introduction of energy/carbon taxes. The perceived relationship between eco-taxes and decreased international competitiveness lowers the political feasibility of energy taxes (Barde 1999, EUA 1996, OECD 2001a: 71pp.). This can be shown by the Clinton administration's effort to introduce the BTU (energy) tax in 1993 as well as by the Australian Greenhouse Levy (1994) which both collapsed when energy-intensive industries complained that they would be disadvantaged in the global marketplace (Hoerner and Muller 1996). Discussions about a loss in competitiveness were also apparent in the European cases of energy/carbon tax adoptions. In order to increase the acceptability of energy taxes and to avoid possible negative economic effects, all governments which adopted energy taxes provided exemptions and/or rebates for energy-intensive industries (Ekins 1996: 17, OECD 2001a: 72).[20] Furthermore, energy/carbon taxes mostly are embedded in a more or less general tax reform focussing on the so called "double dividend" which in fact holds the tax burden constant (Barde 1999: 34).[21] Finland which first adopted a tax on fossil fuels according to their carbon content was until 1997 "the only country that did not grant reductions in energy taxation for industry" (Teir 1999: 305). However, it was forced not only to change the approach in electricity taxation from fuels to end products (OECD 2001a: 59) but also to introduce some lower tax rates for industry. These changes were necessary in order to cope with competitive pressure and competition rules within the EU resulting from the Finnish entry into the EU and the liberalisation of the European electricity markets.[22] Additionally, the Finnish reform (1996) now likewise focuses strongly on the "double dividend" – compensating increased green taxes by reductions of the tax wedge on labour (Barde 1999: 34pp.).

20 About the economic and ecological impact of those mitigation strategies applied by all OECD governments, compare OECD 2001a: 79pp.

21 For most of the enterprises, the green tax reform in Germany resulted only in an additional tax burden of less than 1 % of turnover due to the various exemptions. Furthermore, in most industry sectors tax compensations resulting from lower contributions to the pension schemes outweighs higher taxation (OECD 2001a:75p.).

22 "Thus compared to other Nordic countries the energy taxation of industry was much higher and provoked concerns among Finnish industry about the economic impact on their operations vis-a-vis that of their international competitors…Competition in electricity market is in practice determined by electricity produced by coal. Thus the taxation of coal is critical. The high tax on coal, used in Finland for electricity production, dramatically reduced the competitiveness of Finish energy production."(Teir 1999: 305f.)

The diffusion of energy taxes provides a good example that although the perceived threat of competitive disadvantages may considerably restrict national environmental policy making and stifle the international diffusion dynamic, it does not in all cases prevent unilateral adoptions of those policies by international fore-runner countries.

The dynamics behind this spread within the European context can be described on the one side as a process of lesson-drawing on how to reconcile the global climate protection issue with national economic and public policy objectives. On the other side, the spreading of energy/carbon taxes reveals aspects of both diffusion mechanisms: ideational competition in order to provide the nation state's stake for global climate protection as well as regulatory competition for ensuring competitive advantages for domestic industry as the spread of similar mitigation strategies (exemptions and rebates for industry sectors) indicates. Furthermore, embedding energy/carbon taxes in comprehensive tax reforms uncovers also other policy objectives and political attempts to gain additional benefits from this reform, as revenues raised from energy related taxes are "channelled to reduce the marginal tax rates of other distortionary taxation" (OECD 2001a: 123).

3.4 Legal Provisions on the Free Access to (Environmental) Information (FAI)

3.4.1 Innovation Profile

FAI-provisions are regulations granting all citizens the free access to information held by public authorities. With regard to FAI-provisions one has to differentiate between regulations concerning the access to information in general and specific regulations concerning the access to environmental information in particular. Both types of transparency-laws intend to increase the general accountability and public control of bureaucratic action and both – general as well as specific regulations – include the free access to environmental information.

FAI-provisions are cross-cutting instruments covering all environmentally relevant issues. They aim at ensuring the availability, comparability and public accessibility of any kind of environmentally relevant information. On the one hand they include the obligation of public bodies to gather and disseminate information and to keep the public informed about relevant environmental developments (active obligation). On the other hand they oblige public authorities to respond within a given time frame to specific requests for information from the public (passive obligation). FAI-provisions cover environmental data and statistics as well as information about activities of private entrepreneurs held by the authorities. Essential elements are:

- a provision for free access to information for all citizens, regardless of their interests or legal standing;
- a definition of the types of information covered by the regulation; and
- a list of clearly defined exemptions.

Differences between national regulations can be found, for example, with respect to the costs for providing information, time frames, the range of public authorities which are required to make information available and complaint procedures.

3.4.2 The Profile of Spread

Public access to information looks back on a long tradition. So-called transparency laws existed for example in Sweden since 1766 (FOE 1995: 5; Kloepfer and Mast 1995: 143). Until the year 2000, FAI-provisions have been adopted by about 80 percent of all OECD and CEE countries (see figure 6).

The above mentioned existence of two types of FAI-provisions makes it difficult to clearly indicate the point of departure of their globally observable spread. Although general provisions for public access to information, in principle, also include environmental matters, it can be argued that environmental protection only started to become an important area of public policy in the second half of the 20th century. Therefore, in our analysis we will look at FAI-provisions which have been adopted starting from the second half of the 20th century.

A first phase of policy development which we classify as the development and spread of *general* provisions for public access to official documents started in 1949 with the transformation of the above mentioned Swedish constitutional provision into the Act on Free Public Access to Government and Official Files within the frame of the Freedom of Press Law (Kloepfer and Mast 1995: 143). Shortly after, in 1951, Finland adopted the Act on Publicity of Official Documents. These temporarily very close adoptions can be traced back to the early and deep connection between Finland and Sweden.[23] Such interrelations of regions are often perceived as structural determinants of diffusion.[24]

The next adoption of a FAI-legislation took place in the USA 15 years later. The 1966 US Freedom of Information Act (FOI) (and its later amendments) is predominantly quoted as the salient model demanded for copying by environmental organisations worldwide.

All national adoptions of this first phase concern general FAI-provisions. The relatively slow rise in the run of the curve suggests that it was driven by bilateral relations between the adopting states rather than by an organised dissemination and or promotion at the international level. Regional cooperation between several geographically linked countries explains to some extent the diffusion among Scandinavian countries (in addition to Sweden and Finland, Norway and Denmark adopted acts on public access to information in 1970).

A second phase during the 1970s and 1980s was characterised by a sequence of mainly sporadic adoptions causing a continuous, but still rather slow rise of the diffusion curve. Finally, starting in 1991, the rate of adoption of FAI-provisions suddenly accelerates. Interestingly, from this year on most of the adopted FAI-provisions specifically concern *environmental* information. With its comprehensive environmental framework law of 1991, the Resource Management Act, New Zealand was the first country to introduce a national provision for free access to environmental information, followed by Latvia in the same year as the first country from CEE.

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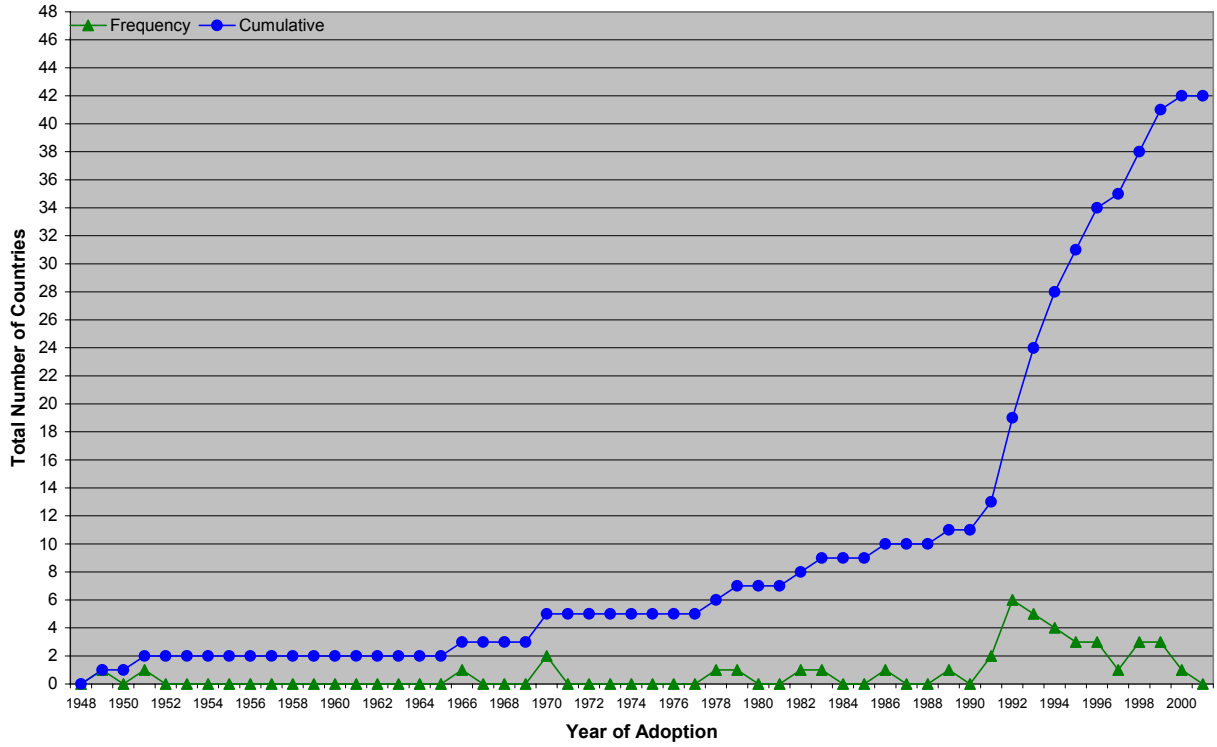
23 No more than around 80 years ago Finland became an independent republic (1917). It was a part of Sweden from 1323 until 1809 (the remaining time until 1917 it had the status of an autonomous grand duchy of Russia). And as the Swedish law from 1949 rooted in the constitutional provision from 1766, which was legally binding for Finland too – the nearby dates of adoption can be interpreted by these historical connections.

24 For the network-analytical approach used in political geography see for example Lutz 1987.

The increased frequency of adoption of public access laws from 1991 until 1999 compared with the earlier phases has been influenced by a number of factors. In June 1990 the EU passed a directive on free access to environmental information (Directive 90/313/EEC). At the international level, the Rio-Declaration of 1992 made explicit reference to public participation and free access to information.[25]

Figure 6: Spread of Public-Access-to-Information Provisions in OECD-Countries and Central and Eastern Europe



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After the collapse of the CEE communist systems in 1989/90, the new governments as well as societal actors started to realign predominantly with the Western model of democracy.[26] Immediately a transition process started towards a system based on democratic rules and civil rights. An additional impact on the motivations of some of the CEE countries to adopt FAI-provisions resulted from the early and meanwhile relatively certain prospect of their integration into the EU. The adoption of the whole *acquis communautaire* – including the EU-directive on free access to environmental information – constitutes a necessary prerequisite of integration[27]. In 1992 four

25 Principle 10 states: "Environmental issues are best handled with the participation of all concerned citizens, at the relevant level. At the national level, each individual shall have appropriate access to information concerning the environment that is held by public authorities, including information on hazardous materials and activities in their communities, and the opportunity to participate in decision-making processes. States shall facilitate and encourage public awareness and participation by making information widely available. Effective access to judicial and administrative proceedings, including redress and remedy, shall be provided."

26 In a couple of these countries environmental groups even constituted a bearing part of the anti-regime-opposition.

27 For further considerations about this type of more or less imposed policy-transfer in the EU enlargement process see Tews 2000, 2001.

out of six countries introducing FAI-provisions were from CEE: The Ukraine and Hungary adopted FAI-provisions as a general act on free access to information held by public authorities. Bulgaria and the Czech Republic included FAI-provisions in their new environmental framework legislation. Especially the Hungarian, but also the Bulgarian legislation have been quoted as being very progressive (FoE 1995:10).

In 1993 the UN Economic Commission for Europe (UNECE) – within the Environment for Europe process – was called upon by the participating environmental Ministers to set up a task force on environmental rights and obligations – culminating in 1998 at the 4th Ministerial Conference in the Environment for Europe series in the adoption of the UNECE Convention on Access to Information, Public Participation and Justice – the so called Aarhus Convention. At the beginning of the 21st century the issue of free access to environmental information has captured the political agenda of almost all international organisations.[28]

Summarising, we can observe that the diffusion of FAI-provisions started to accelerate when the issue entered the agendas of supranational bodies and international organisations. They served as international platforms for the original promoters of these legal provisions – citizens' and environmental organisations. The process can be partially referred to as a "bottom-up" mechanism of convergence, driven mainly by non-governmental actors and actor-networks, which effectively used international platforms as catalysts and multipliers. Later it turned to a more "top-down-driven" mechanism.

Like in the case of the eco-labels, the transposition of the EU-Directive into national law of the member states should not be equated to the term of diffusion. Nevertheless, prior to the adoption of the directive, experiences from the Scandinavian countries, the Netherlands, from France as well as from the USA were explored and used by European environmental NGOs, the European Parliament and the EU-Commission to develop a draft directive. In spite of the importance of the EU-directive, a reduction of the international spread of FAI-provisions to EU-policy-making would ignore the fact that only 8 out of 25 countries which between 1991 and 1999 adopted the FAI-provision did so in order to comply with EC-law.[29] The remaining national adoptions can be attributed to processes of diffusion, meaning the adoption of policy-models developed by other countries or – and this is increasingly important especially with respect to this innovation – developed and disseminated by actor networks co-operating closely with strong international organisations.

It is interesting to note that FAI-provisions were adopted even by countries[30] with little public capacity to gather, organise or provide these types of information, and where NGOs were very weak. This leads to the assumption that policy adoption may not always be motivated by the expected impact of policy instruments (i.e. more efficient participatory environmental management), but rather by the relative importance of an innovative policy instrument on the global en-

28 See for example OECD Council Recommendation on Environmental Information, adopted in Paris by the Environmental Ministers and the OECD Council in 1998, or the Free Access Provisions within the Environmental Side–Agreement to the North American Free Trade Agreement from August 1993.

29 1992: United Kingdom, Luxembourg; 1993: Ireland, Portugal; 1994: Belgium, Germany; 1995: Spain; 1997: Italy.

30 For example in 1998 Albania and in 1996 Macedonia.

vironmental agenda. The latter seems to be a decisive factor for explaining the international spread of FAI-provisions – in any case, sufficient to motivate the adoption of FAI-provisions, as they are suitable to be communicated as an appropriate response to a norm within an international and environmental responsible society within which the respective adopter intends to be a legitimate member. With respect to the perspective of global convergence in FAI-provisions it can be assumed that the high prominence of that issue as it is represented in international declarations and conventions may facilitate a future *international policy-output*. UN-Secretary Kofi Annan interpreted the adoption of the Aarhus Convention as "a giant step forward in the development of international law in this field" (OECD 2000:13).

4. Conclusion

The still very preliminary findings suggest that the adoption of environmental policy innovations is more likely if these policy innovations figure prominently on the global political agenda. Political and societal interlinkages between nation-states and actors within and across states offer channels of diffusion which enable the transfer of problem perceptions, ideas and policy innovations across countries and to the level of international organisations. These may function as multipliers of knowledge-dissemination and/or ideational catalysts of policy-convergence.

At first sight, international organisations in their role as trans-national advocates or promoting agencies for policy innovations crucially affect the speed of policy diffusion. As an overall statement the assumption holds true: promotion at the international level does matter. However, this statement remains too superficial and the data, in fact, suggests an additional differentiation. For a deeper and better understanding our concluding remarks consider the following questions:

Why does promotion by international agents turn into motivation on the part of national policy makers to adopt a policy innovation?

Why is it that some innovations do not spread even though they are actively promoted at the international level?

Why do some innovations spread without active international promotion?

The above mentioned specific characteristics of a policy innovation offer preliminary answers to the last two questions. The special features of a policy innovation can either facilitate of hinder its widespread adoption. The case of energy/carbon taxes reveals that policy innovations with a high conflict potential due to their redistributive effects are less likely to rapidly diffuse. Moreover, the exposure of eco-taxes to competitiveness concerns considerably affects their political feasibility even in adopting European countries which all apply exemptions for industry to mitigate the perceived but uncertain negative impacts on domestic industry's competitiveness. This is true in spite of the fact that the environmental effectiveness of eco-taxes is widely recognised among scientists as well as policymakers and that these instruments have actively been promoted by many of the most influential international organisations such as the OECD, the UN and also by the EU for many years.

Furthermore, the case of energy/carbon taxes reveals another interesting finding for diffusion research: Political entrepreneurship at the supranational level in multi-level systems like the EU

may – even without having a realistic prospect of *immediate* success to reach a common policy solution – incite pioneer behaviour at the national level. Member state's competition for influence on the shape and administrative design of future community policies may induce such first-mover-strategies.

A comparison of the diffusion of energy/carbon taxes with the cross national adoption of green plans and strategies for sustainable development, both of which became an issue at the international level in the late 1980s, clearly reveals that the characteristics of the innovation determine to a great extent the speed of its diffusion. National environmental policy plans and strategies for sustainable development – as they have been developed in most industrialised countries – can easily be added to existing environmental policies and do not necessarily induce any fundamental policy change. The same is true for eco-labels, which spread relatively quickly as well.

Another preliminary conclusion which can be drawn from the eco-labels case is that, being a predominantly product related measure, the spread of eco-labels is promoted by the dynamics of international trade. If consumer behaviour is at least to some extent influenced by environmental considerations – which can be assumed in most OECD-member states and increasingly within the CEE region – then participation in some type of eco-labeling scheme can be seen as a rationale for ensuring sales opportunities and market shares. Hence, the potential of trade as conduit for policy diffusion may offer an additional explanation for the rapid spread of eco-labels.

In accordance with the insights of organisational sociology that an organisation's propensity to innovate depends on the strength of obstacles, the available resources to overcome these obstacles and the motivation to innovate (Mohr 1969: 114), we can conclude that with respect to energy/carbon taxes most of OECD and almost all CEE countries experienced overwhelming obstacles to adopt such a tax. In contrast, the relatively rapid spread of the other three innovations suggests, that policy makers could overcome more easily the obstacles – if they existed at all. However, the question about the concrete motivations of policymakers to adopt environmental policy innovations is still unanswered. Apparently, the frequency of national adoptions rises as policy transfer becomes more strongly institutionalised at the international level. But how does promotion at the international level influence the motivation of policymakers to adopt these instruments?

One possible answer might be, that the politicians' need and the provisions of international organisation may complement each other. Concerning the politicians' need, the main reason for policymakers to look at what others do is uncertainty, which forces mimetism (DiMaggio and Powell 1991: 69). In this situation, international organisations provide and promote "models" based on national "best practices". Models are an essential prerequisite for mimetism. However, a national policy innovation does not automatically become a model. Here, the promotion and information activities of international organisations and – to a lesser extent – of pioneer countries, play a decisive role.

Addressing the question of policy-makers' motivation to adopt policy innovations, which are promoted, the essential link between promotion and motivation is, that the orientation towards models provides legitimacy for policy-makers decisions (Radaelli 2000: 28). The attempts of national policy makers to cope with uncertainty may account for their orientation at internationally promoted policy innovations or models. This orientation offers additional political advantages

because it may serve as an external source of legitimacy in the national context, as well as an attempt to verify the nation states' legitimacy within the global community, which socialises its members as environmentally responsible.

The empirical finding that the frequency of national adoption regularly rises as transfer becomes institutionalised at an international level suggests that policy convergence by diffusion may not only be motivated by considerations of efficiency-improvement, but instead or additionally by considerations of generating legitimacy.

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