Environmental governance in Europe

The impact of international institutions and trade on policy convergence

1 Introduction: environmental policy convergence in Europe?

Are environmental policies in European countries growing more and more similar? In this era of globalization it seems likely. But is it really true? And if it is true (and it is, as will be demonstrated in this brochure), at what level do national environmental policies converge? Are countries generally reaching out to the most stringent and most effective models available, or does increased international competition rather force them to adopt less demanding levels of regulation?

And perhaps even more importantly: how and to what extent can the process of environmental policy convergence be influenced? Is the process mainly fuelled by the international trade interests of individual states? Or does policy coordination by, for instance, the European Union (EU), the Organization for Economic Cooperation and Development (OECD) or specific environmental treaties play a decisive role? In the case of a strong impact of international institutions, there is probably more room for directing and re-directing the process of environmental policy convergence than if market forces turn out to dominate. Or, finally, could it be that there are no international mechanisms at work at all? Could policy convergence simply be a matter of similar, but independent responses to similar problems occurring in different countries?

These questions have been the subject of the ENVIPOLCON project, carried out between 2003 and 2006 by five universities in three countries[1]. To answer these questions, ENVIPOLCON employed an innovative combination of quantitative and qualitative methods. The first part of the project entailed a quantitative analysis of the development of 40 environmental policy items over 30 years in 24 countries (21 European countries as well as the USA, Mexico and Japan for reasons of comparison). This provided an unprecedented picture of the overall patterns and main causes of convergence. On that basis a number of particularly interesting cases was selected. These were investigated in depth in the second, qualitative part of the project in order to find out how convergence actually 'works' in practice, who the key players are and which mechanisms apply under which conditions.

This brochure gives a short but comprehensive overview of the findings and policy implications of the ENVIPOLCON project.

[1] For organisational details of the ENVIPOLCON project, see the last page of this brochure.

2 Does policy convergence exist?

The empirical findings of the ENVIPOLCON project strongly point to the occurrence of environmental policy convergence in Europe in the period 1970-2000. This conclusion is valid in two senses. Environmental policies have generally grown more alike over time (so-called *sigma*-convergence), but at the same time they have moved into an 'upward' direction, thus becoming more strict (so-called *delta*-convergence). Hence, a 'race to the bottom' due to regulatory competition - i.e. a lowering of environmental standards by countries as a consequence of engaging in competitive markets, as often predicted in the literature - does not appear to have taken place.

Tables 1 and 2 summarize these findings. The first one deals with *sigma*-convergence, measuring similarity regardless of the level of regulation. This type of convergence is calculated with the so-called pair approach. According to this methodology, convergence is the increase of policy similarity between country pairs over time. The left part of Table 1 reveals that the average similarity of environmental policies in European country pairs grew impressively from 3.5% in 1970 to 56.1% in the year 2000 (where 100% would mean that all 40 policies are equal in all 24 countries). The *sigma*-convergence rate strongly increased over time, from a change in similarity of 10 percentage points in the 1970s to 37 percentage points in the 1990s.

Table 2 refers to *delta*-convergence, i.e. the direction in which policies converge. The measurement is based on assessing the gaps between individual country policies on the one hand and 'strictest available policy options' for each policy and for each decade on the other. This way, it is possible to assess whether policies are actually moving 'upward' or 'downward' over time. In Table 2, the results are shown for 21 policy items in the ENVIPOLCON sample that are based on numerical settings, such as emission standards or green taxes. Policy gaps have been standardized between 0 and 1. The table shows that the average gaps decreased from 0.94 in 1970 to 0,60 in the year 2000, which means that policies unmistakably converged in an 'upward' direction. In the same period, the policy gap change rate increased from 0.06 in the 1970s to 0.14 in the 1980s and 1990s, reflecting a notable trend of *delta*-convergence.

While the general trends are clear, some interesting features are worth emphasizing. First, stronger convergence is found in the 1990s than in the 1970s and 1980s. Second, convergence is most prominent for the *adoption* of certain environmental policies as such, e.g. having or not having a policy on contaminated sites. Although still clearly visible, convergence is less notable for the adoption of certain policy *instruments* (obligatory standards, taxes, liability schemes, etc.) or policy *settings* (the precise level of emission limits, taxes, etc.).

	Policy Similarity				*Sigma-Convergence*			
Year / Decade	1970	1980	1990	2000	1970s	1980s	1990s	Average
All policies	3.5	13.7	29.2	56.1	10.3	17.7	36.9	**21.6**

Table 1: Policy similarity (mean values in %) and *sigma*-convergence (increase of similarity in percentage points)

	Average Policy Gap				*Delta-Convergence*			
Year / Decade	1970	1980	1990	2000	1970s	1980s	1990s	1970-2000
21 settings items	0.94	0.88	0.74	0.60	0.06	0.14	0.14	**0.34**

Table 2: Policy gaps and *delta*-convergence (standardized between 0 and 1)

3 How can the astonishing degree of convergence be explained?

Three factors related to globalization can be expected to be responsible for the observed convergence of environmental policies: (1) international cooperation of countries and harmonization of environmental law, (2) transnational communication within international institutions, and (3) regulatory competition in increasingly integrated markets. Apart from this, domestic factors, such as environmental problem pressure, the presence and activity of green parties or the level of income might also contribute to the convergence of policies. In order to determine which of these factors best explain the observed convergence a statistical analysis of both policy similarity (*sigma*-convergence) and the direction of convergence (*delta*-convergence) was carried out. This analysis yielded the following results:

First, international harmonization contributes most to the explanation of convergence. Somewhat surprisingly, accession to and membership in the EU seems to be less effective for convergence than accession to other international environmental institutions. However, this result can be explained by the fact that, seen over the whole period 1970-2000, EU members form only a minority of the entire sample of 24 countries.

Second, the overall effects of transnational communication on environmental policy convergence are almost as strong as the effects of international harmonization. This is surprising, as intuitively one might have expected harmonization to be a more powerful mechanism of convergence than communication. And indeed, the effect of transnational communication on convergence is particularly pronounced with respect to non-obligatory policies, i.e. policies which are not subject to some form of binding international regulation. As soon as a harmonized policy is put in place, there is not much room left for transnational communication to influence further convergence.

Third, the explanatory potential of the mechanism of regulatory competition is much lower than that of international harmonization and transnational communication. Apart from failing to produce the often predicted 'race to the bottom', there is no effect of regulatory competition that goes beyond the effects of harmonization or communication. Moreover, the impact of trade is not more pronounced for trade-related policies than for those not directly related to trade.

Fourth, domestic factors also contribute to the explanation of environmental policy convergence. Among the factors controlled for in the ENVIPOLCON project, the effects of income are most pronounced, whereas political demand exerted by green parties and environmental problem pressure shows weaker effects.

These results do not differ much for *sigma*- and *delta*-convergence. Both the increasing similarity and the 'upward' movement of the level of regulation are best explained by international harmonization and transnational communication, while trade does not have an impact that goes beyond these institutional effects.

4 Going in depth: findings from the case studies

Six policy case studies, each conducted in The Netherlands, France, Hungary and Mexico, aimed to increase our understanding of the precise dynamics of international harmonization, communication, regulatory competition and relevant domestic factors. They also strove to reveal mechanisms that explain some of the surprising results of the quantitative analysis such as the limited evidence for regulatory competition.

The selected policy cases feature varying characteristics. We looked at standard settings, policy instruments and policy principles. In addition, both obligatory and non-obligatory policies were included. The four countries differed with respect to their embeddedness in international institutions and markets. Hence, the 24 stories (6 x 4) allowed us to focus on a range of potential convergence mechanisms from a comparative perspective. Three general findings deserve to be highlighted:

First, while international harmonization leads to notable policy change and accounts for growing policy similarity in all countries, it is often only the final step in a longer convergence process. Regulatory competition and transnational communication between countries frequently precede the decision to harmonize policy and - more importantly - tend to produce initial policy adaptation on the national level. In other words, countries begin moving towards common policies much prior to the decision for an obligatory international policy or standard. International harmonization, however, succeeds in bringing on board the remaining policy laggards.

Second, transnational communication already proved highly relevant for policy convergence in the quantitative part of the project. The case studies add to this insight by relating different patterns (e.g. policy promotion, policy emulation, lesson drawing) to different roles countries play on the international scene. The Netherlands were shown in various instances to initiate transnational discussion and promote a policy model. France, by contrast, was less prone to use international institutions or networks as a platform for promoting its own ideas and it appeared resistant to such (foreign) promotion. Hungary and, outside the EU, Mexico responded rather quickly to transnational as well as bilateral stimuli mainly as a means for gaining international legitimacy.

Third, considerations of international competitiveness *do matter* in national environmental policy making, although these concerns need not necessarily result in international policy convergence. Hence, environmental policy that relates to production processes may be perceived as costly and endangering the competitiveness of domestic industry, but it may also be seen as a useful framework to make future investment decisions more calculable and to attract foreign investors. Such different framing depends on domestic factors (problem pressure, environmental awareness, economic development) as well as issue characteristics (environmental risk, potential to externalize environmental harm). Even in cases where environmental policy is perceived as (too) costly, countries may adopt strict standards acquiescing national and foreign stakeholders and gaining international acceptance. Under those conditions, they tend to react to competitive pressures only at the implementation stage, where domestic industries may benefit from lax enforcement. In short, patterns of regulatory competition are both more complex and less visible than the theory predicts.

For the overall story of convergence in environmental policy the case studies succeeded in connecting international and domestic factors and highlighting interaction effects that could not be modelled in the quantitative part of the research. In doing so, they managed to shed more light on the often neglected micro-processes of cross-national policy convergence.

5 A 'race to the top' in the regulation of industrial discharges into surface water?

In this section, one of the case studies of the ENVIPOLCON project is described in some more detail. The case traces the development of limit values for industrial discharges into surface waters, focusing on chromium, copper, lead and zinc as well as Biological Oxygen Demand (BOD) in four countries: France, Hungary, Mexico and the Netherlands. These process standards were selected because they are not regulated at the international level[2], which allows us to observe the impact of transnational communication and trade effects on convergence patterns in the absence of international harmonization.

All four countries converged to the top over the observation period 1970-2000. Figure 1 shows the example of limit values for chromium.
Embeddedness in international markets and international institutions appeared to be relevant for all four countries, yet to a varying degree and with different impact over time. In **France**, the power of the industrial sector and a well-established system of effluent charges and subsidies prevented an early convergence to the sample. However, since the 1990s, the indirect, but growing impact of European regulation led to stricter limit values and improved enforcement, entailing a convergence to the top. In the **Netherlands**, high problem pressure led to a strong demand for water protection and strict limit values, which counterbalanced possible effects of regulatory competition. International institutions did not have a notable impact on Dutch policy before the late 1990s but were rather used as a platform for promoting domestic standards at the international level. In **Hungary**, the powerful water quality sector was responsible for the early start of the policy and the increasing stringency of standards. Regulatory competition could not work in the closed communist market. After regime transition, the overriding effect of EU accession pushed regulatory competition to the background. For **Mexico**, the strongest influence for convergence was a form of 'conditionality' on behalf of the USA. After accession to the North American Free Trade Agreement (NAFTA), the specific combination of domestic factors (stronger environmental interest) and continuing international pressure led to a relaxation of certain standards, aiming at better (i.e. more feasible) implementation (see Figure 1).

The impact of international aspects increased over time in all countries, whereby institutions like the EU or NAFTA were regarded as a motor and leverage for domestic actors to pursue environmental interests. Interaction effects between international economic and institutional integration as well as domestic factors prevented a downward shift of regulation. Effects of regulatory competition seemed to be present during the implementation phase rather than during policy formulation which explains that no 'race to the bottom' of standards could be observed.

[2] EU Directive 76/464/EEC only requires member states to establish programmes in order to reduce pollution by those substances, without specifying concrete limit values.

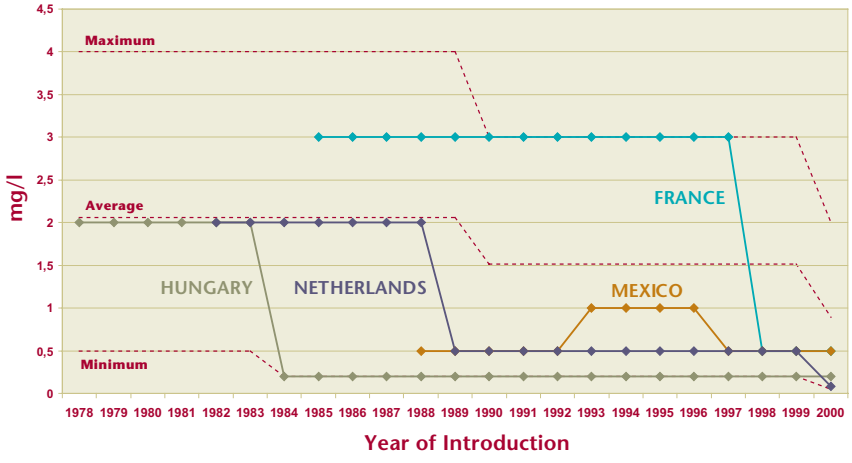

Figure 1: Limit values for industrial discharges of chromium into surface waters

6 Practical and Political Implications

From the ENVIPOLCON project, several findings emerged that have important implications for policy makers and practitioners.

The first and most important insight in this respect is that *globalization drives environmental protection*. In contrast to often-feared scenarios of environmental 'races to the bottom', the ENVIPOLCON results show that growing similarity of environmental policies coincides with a constant strengthening of environmental standards over time. This development is essentially the result of growing international institutional interlinkages between nation states.

Second, and more precisely, the positive effect of globalization on environmental protection is to a considerable extent triggered by the fact that nation states increasingly communicate with each other and exchange their perceptions and regulatory solutions with regard to environmental problems. In other words, *communication matters*, in particular by facilitating processes of cross-national policy-learning. Governments watch each other very closely, either because they want to avoid the impression of falling behind the others or because they seek to draw lessons from successful policies developed elsewhere.

Third, there is no evidence that economic integration has negative effects on environmental protection. Regulatory competition does not lead to environmental races to the bottom. Rather, the findings suggest that *regulatory competition drives international cooperation in environmental protection*. To avoid downward pressures on environmental regulation, countries seek to harmonize standards by establishing international or supranational rules and regimes.

Fourth, there is evidence that *environmental leaders are able to pull along the laggards*. This holds true, on the one hand, with regard to environmental standard-setting through international harmonization. The establishment of legally binding agreements at the international level typically implies that low-regulating countries adjust their standards to the level of the environmental forerunner countries. In other words, the leaders are generally able to set the pace in international environmental harmonization. On the other hand, this effect is also relevant in the absence of legally binding agreements. Mere communication and information exchange can induce laggard countries to raise their standards, as they seek to avoid the blame of being perceived as 'pollution haven'.

Finally, it is important to *watch the implementation* of environmental standards and agreements. While laggards in the context of growing economic and institutional interlinkages have a strong interest in enhancing their international environmental reputation by adopting strict environmental standards, they have at the same time an incentive to cheat with regard to the implementation of these standards. This is mainly due to reasons of economic competitiveness. However, implementation effectiveness can be improved by the establishment of international control structures. Moreover, the mere existence of strict standards gives domestic pressure groups in these countries important leverage to push for effective implementation.

The ENVIPOLCON project

ENVIPOLCON is the acronym of 'Environmental governance in Europe: the impact of international institutions and trade on policy convergence'. The project was carried out between 2003 and 2006 by the following universities:

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