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The case of the 'Seville Process'

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Summary

The aim of this paper is twofold. First, it seeks to identify theoretically driven hypotheses related to the factors (independent variables) that explain the conditions under which "new forms of governance", with emphasis on regulatory agencies and networks, are able to render accession "smoother". Second, it provides a preliminary account of the validity of our hypotheses though an exploratory case study that focuses on a case of delegation of regulatory competencies to a participatory network in the area of environmental policies. The case of the IPPC Seville process is perhaps the only example of delegation of regulatory competencies in the area of environmental policies. Our exploratory case study reveals a number of institutional properties that render comparisons with the case of regulatory networks in pharmaceutical sectors (PERF) very promising. First, as in the case of the PERF, the EIPPCB technical working groups have quasi-regulatory competencies since they adopt 'indicative' emission thresholds based on Best Available Techniques (BAT) for industrial plants. Second, they include a large number of public and private actors. Third, the regulatory outcomes of the process (BAT-based emission thresholds) for each industrial sector are the outcome of a benchmarking exercise between participants in the process. Fourth, rules governing network interactions and conflict resolution mechanisms are mainly informal based on non-majoritarian consensual decision making. The paper seeks to identify the institutional properties of the IPPC regulatory network and assess its regulatory outcomes. Finally, we draw some preliminary conclusions about the role of new modes of governance for 'smoothening' enlargements and we identify areas of further research concerning the extent to which new modes of governance have been employed as mechanisms of conflict resolution.

Contents

Introduction[1]

In recent years much of the debate on the future of EU integration concentrates on the enhancement of effectiveness and efficiency of regulatory policy making. Compliance deficits with EU legislation, slow legislative processes, deadlocks and the increasing diversity of the EU are, epigrammatically, the main caveats that justify the growing quest for novel modes of governance that depart from traditional command-and-control uniformly binding regulatory approaches. New modes of governance cover a wide range of different policy processes such as the open method of coordination, voluntary accords, standard setting, delegation to regulatory networks and agencies, regulation 'through information', benchmarking, peer review, informal agreements, as well as forms of policy experimentation in different economic sectors, where a new mix of public and private goods is aimed at (e.g., Héritier, 2003). They are characterized by the principles of voluntarism (i.e., non-binding targets, soft law), subsidiarity (i.e., the delegation of decision-making competencies to member states or private actors), and inclusion (i.e. the participation of all relevant actors in the decision-making process). These "modes of political steering concern both rule-setting and rule-implementation processes including ensuring compliance with international norms" (Börzel, 2002). Since new modes of governance represent an alternative to regulatory requirements (i.e., 'hard law'), they are expected to facilitate consensual decision making by minimizing resistance of decision makers and implementing actors as regulatory adjustment costs remain low (Héritier 2001: 9). Consequently, new modes of governance are expected to be politically more efficient and more effective (e.g., Héritier 2003; Jachtenfuchs 2001; Kohler-Koch/Eising 1999).

From the end of 1980s onwards environmental policy is an area of intense experimentation with such novel regulatory approaches. Literature offers an abundance of explanatory factors that contributed to the proliferation of new, less coercive, market-based policy instruments both at EU level and individual member states (Collier, 1998; Golub, 1998, Jordan et al. 2003a; 2003b; Lenschow, 2002; Golup, 1998; Knill/Lenschow, 1999). However, little attention has been drawn to regulatory networks, their performance and regulatory effects in terms of policy outcomes. The aim of this paper is to explore theoretically driven hypotheses from literature on new modes of governance and delegation to regulatory networks in order to identify the main institutional properties that enhance efficiency and effectiveness in policy formulation and implementation. To explore our research questions we proceed as follows: First, we recapitulate the theoretical work on delegation to regulatory networks and non-hierarchical steering modes as specific facets of new modes of governance in environmental policies. Second, we analyse the experience from the Integrated Pollution Prevention and Control (IPPC) network(s) organised under the auspices of the IPPC Bureau in Seville in order to assess the scope and effects of delegating regulatory competencies to participatory networks. The IPPC Directive (96/61) introduces significant innovations in EU environmental policies. It is the first time that EU environmental policies depart from media-specific regulatory approaches to pollution abatement by introducing an integrated approach that incorporates a single permit system covering all pollutant activities of industry, in waters, air, and land. These permits are to be based on 'Best Available Techniques' (BAT). The definition of BAT is delegated to ad-hoc co-regulatory sectoral and sub-sectoral networks that comprise the Commission, the member states, enterprise associations, individual firms, environmental organisations, research institutes, universities, national and EU regulatory agencies. These networks operate under the auspices of a European IPPC Bureau (EIPPCB) in Seville.

[1] An earlier version of the paper was presented to the EUSA 9th Biennial International Conference, Austin, Texas March 31 – April 2, 2005, Panel 05G *Governance, Networks and Environmental Policy*.

The analysis of the so-called 'Seville process' seeks to assess the regulatory effects of such participatory structures of policy making. The analysis focuses on two fundamental institutional properties of regulatory networks that are considered by the literature as catalysts for the enhancement of effectiveness and efficiency in regulatory policy making. First, we account for the actor dimension, namely the regulatory effects of inclusive networks of all affected interests (firms, private interest groups and non-governmental organizations, national and European agencies and national civil servants). Is a participatory structure more effective than the classical legislative process in reducing potential conflicts at the stage of policy implementation? Is there any trade off between efficiency and legitimacy? Second, we assess the effects of non-hierarchical steering modes prevailing in the decision-making process between network participants. Much of our current understanding of the dynamics of transnational regulatory policy making is based on theories of regulatory competition and notions of races to the top or bottom of regulatory spectrums in different policy areas (Radaelli, 2004; Holzinger and Knill 2004). Regulatory competition between environmentally advanced EU member states that actively seek to upload their regulatory models at the EU and laggards that rarely succeed to influence EU policy developments amplifies existing disparities between member states. In light of the enormous economic, political and administrative disparities between new and old EU member states, we raise the question as to which extent regulatory networks facilitate a smoother adoption of and adaptation to costly EU environmental legislation. To what extent do learning, persuasion and the diffusion of best regulatory practices facilitated by regulatory networks lead to policy outcomes that differ significantly from those stemming from traditional steering modes based on bargaining and imposition? In other words, can new forms of governance reduce the influence of conflicting national interests over the level of environmental regulatory standards, especially in areas that entail significant investments in physical and institutional infrastructure? Are they more efficient in facilitating rapid regulatory responses to technological innovations in the area of pollution abatement? What is their degree of effectiveness in achieving the stated objectives of the IPPC Directive, namely a high level of environmental protection through the diffusion of BAT for pollution abatement, and what is the nature of regulatory outcomes in the policy area?

Why delegate? Dimensions of new modes of governance

In its White Paper on Governance, the European Commission attributes an important role to agencies and regulatory networks for the better application of EU rules (European Commission, 2001: 23f). The bulk of the literature on delegation focuses on the driving forces that condition the incentives of political actors to delegate policy-making competencies to independent regulatory agencies and/or regulatory networks operating under their auspices, their institutional design and the consequences of delegation for democratic accountably and control. Rational choice approaches conceptualise delegation to independent regulatory agencies (IRAs) as a response to powerful functional pressures emanating from the expansion of the regulatory role of the state as a distinctive mode of social coordination (Majone, 1994; 1997a). The principal/agent framework that dominates studies of delegation to non-majoritarian institutions, stresses four common explanations why delegation to independent regulatory agencies or networks might be beneficial for political efficiency. First, delegation is used to reduce political transaction costs emerging at the stage of negotiation between political actors (cf. Epstein/O'Halloran 2000; Héritier 2003: 203). Second, delegation to specialized bodies is expected to facilitate policy continuity given the complexity of socio-economic phenomena, the acceleration of scientific and technological developments and the growth of international interdependence. Everson et al. (1999: 21) indicate that "a reason for proposing the creation of European agencies in several areas of economic and social regulation is the perception of EU citizens and economic actors alike, that the present system – with its heavy

concentration on rule making and its weak control of the enforcement process – is no longer able to cope with the regulatory challenges of global markets". The high collective stakes attached to these challenges demand continuity of public action, which is not always achieved by political actors because of short-term electoral constraints (Majone 2001; 1997b). Third, the increasing technical and scientific complexity of many regulatory issues has led to the establishment of agencies and public/private networks which contribute expertise in these substantive matters (Héritier 2003: 203). Mobilization of all knowledge relevant to public decision making requires a stable relational context among peers that minimizes bureaucratic or political bias during deliberations (Moe 1990; 1995). Such a framework is hard to find within public administrations. Finally, agencies and regulatory networks may pave the way for a closer incorporation of civil society into governmental institutions. Everson et al. (1999: 32) argue that separateness from government may make them a preferred mechanism for co-opting certain groups into the decision-making process. Thus, agencies and networks function as intermediary institutions between state and civil society. Additionally, as depoliticized bodies eager to improve their own public reputation, agencies and regulatory networks contribute credibility and reliability as well as public confidence in regulatory processes and outcomes (Pollack 1997).

Cross – media pollution prevention policies concentrate all the above functional pressures that encourage political actors to seek alternative to traditional legislation steering modes in policy formulation and implementation. Available technology enables or constrains policy options, especially regarding the stringency of environmental standards and the instruments of monitoring and enforcement. The generation and diffusion of new technologies across a wide spectrum of sectoral economic activities requires rapid regulatory responses that enhance learning capacities and diffusion in those economic sectors and countries with weak economic and knowledge resource base. Knowledge gaps and uncertainties regarding the causes of environmental damage, its real dimensions and the effective remedies require stable continuous interaction between policy makers, economic actors and epistemic communities. Diverse ecologic conditions within the EU render the adoption of uniform pollution abatement standards ineffective. Variations in the absorption capacities of different geographical areas result in significant regulatory distortions with considerable economic effects between different polluting activities (Holzinger 1999). Moreover, in contrast to product standards, economic actors, especially from member states with comparatively weak environmental regulatory regimes may, in the short term, face strong disincentives to comply with environmental process standards that reduce their competitiveness (Sharpf, 1994). As a result, the adoption of environmental standards and the definition of procedural requirements for their implementation have triggered intense competitive pressures between EU member states seeking to avoid high adjustment costs by uploading their domestic regulatory models and traditions at the EU level. Given the persistent economic disparities between EU member states and the scale of required administrative adjustments and financial investments, regulatory competition has generated a leaders/laggards dynamics in EU environmental policies (Börzel, 2003). The accession of southern European member states (Greece 1981 and Spain and Portugal 1986) with weak institutional and administrative capacities and limited or even no prior experience in pro-active environmental policies, coupled with an acceleration of legislative output that followed the launch of the internal market programme, have fostered the emergence of a deficit in member state compliance with environmental legislation (Börzel 2003; Mendrinou 1996; Tallberg 1999). The same holds for the recent eastern enlargement. As latecomers to the EU, the Central Eastern European countries (CEECs) face two serious problems regarding the adoption of EU legislation. First, they never had the possibility to influence European regulation according to their preferences and policy traditions. Second, they often lack adequate institutional structures and capacities to effectively implement and enforce European regulations. This double disadvantage for European latecomers has led to concerns in the new member coun-

tries about the full implementation of all EU environmental directives (Baker, 2000; Carius et. al., 2000; Homeyer, 2004). Wide disparities between domestic economic and administrative capacities highlight the limits to the harmonization approach.

Compliance problems point to a fundamental paradox in the current EU regulatory regime. The substantial expansion of EU's regulatory competencies from the 1980s onwards has not been accompanied neither by a parallel expansion of the EU's own implementing structures nor by potent enforcement and monitoring capacities. The Commission's DG Environment has rather weak monitoring and enforcement capacities compared to other Directorates General, such as DG Competition (Macrory, 1996). The Commission's access to information regarding member states' compliance performance depends on a rather weak system that involves three main alerting mechanisms: complaints by citizens, business, environmental NGOs, the Commission's own investigations, and petitions and questions by the European Parliament (Koutalakis, 2004). Given the dependency of the Commission on domestic administrations and private actors that are rarely granted institutionalised opportunities to participate in the decision-making process, their systematic inclusion into the policy process seems to provide a viable alternative to the legislative process. The creation of regulatory networks and forums that facilitate exchange of experience, learning and diffusion of best practices between public and private stakeholders reduces the regulatory gap that stems from the unequal distribution of 'say' and 'pay' in EU multi-level governance (Eberlein and Grande, 2005; Dehouse, 1997).

The intensity of the functional pressures analysed above determines the Commission's preferences on the institutional design of regulatory networks. Principals seeking to maximize their influence over policy outcomes, attempt to optimise the equilibrium between delegation and control in order to minimize losses from the network's tendency to gain political and bureaucratic autonomy. The higher the functional pressures experienced by principals in a given policy area the more powers they will delegate to regulatory networks and the weaker will be the control mechanisms. Institutional design of regulatory networks facilitates or hinders certain regulatory policy outcomes. Institutionalist approaches point to two fundamental properties of the institutional design of regulatory networks that enhance effectiveness and efficiency in policy formulation and implementation. First, they include "non-state actors, such as firms, private interest groups, or non-governmental organizations (NGOs) in governance arrangements (actor dimension)"; and second they put "an emphasis on non-hierarchical modes of steering (steering dimension)" (Risse, 2004: 291). In line with theories of deliberative democracy, it is expected that the more inclusive regulatory networks are of diverse interests, the more transparent, effective and efficient will be their policy outcomes (Porte and Nanz, 2004). In multi-level systems that manifest high levels of local and regional diversity such as the EU, participatory network structures that facilitate horizontal coordination and steering between multiple public and private actors are expected to strengthen institutional capacity, especially in complex problems with cross – border effects such as environmental pollution (Heritier, 2002). Non-hierarchical, non-manipulative steering modes, for example, 'arguing' and 'persuasion' instead of 'bargaining', are accomplished through a departure from majority rules of decision making (Risse, 2004). These institutional properties are expected to pave the way to consensual decision making in policies where consensus between affected interests is difficult to achieve. Non-majoritarian decision-making rules and non-hierarchical policy instruments (learning, arguing, persuasion) have greater potential to shape domestic actors' initial preferences and compliance incentives since implementing actors participate in both the target setting and the selection of policy instruments to achieve them (Héritier, 2001: 9). In effect, they reduce administrative costs of monitoring and enforcement by public bodies since participants are committed to voluntary self-regulation. These conditions facilitate learning and the diffusion of best regulatory practices, especially in conditions of uncertainly regarding both the

causes and the optimal solutions and technologies to complex problems (Radaelli, 2000). However, the two institutional properties identified above (actor and steering dimensions) point to two pertinent problems familiar to the collective network action theories. First, the inclusion of all relevant actors in regulatory network structures increases the problem of coordination. The heterogeneity of decision-making arenas in EU environmental policies that embrace product standards, production processes and sustainability regulations reduce the likelihood of the emergence of a clearly identifiable group of non-state actors (environmental organizations, business groups and citizen associations) capable of generating consensual regulatory outcomes (Koutalakis and Prange, 2005). Moreover, variations in non-state actors' organisational resources (knowledge, expertise and financial resources) to monitor and effectively influence policy developments in the definition of environmental technical standards increases the likelihood of network capture by well-resourced actors such as individual enterprises and/or industrial associations. Multiplicity and heterogeneity of participants' preferences, coupled with considerable disparities in the distribution of their resources, point to the pertinence of effective steering modes, namely rules that regulate network interactions and secure durable network functionality. The following sections of the paper will systematically approach the regulatory effects of these two institutional properties in relation to the IPPC network(s) organised under the auspices of the IPPC Bureau in Seville.

The Seville Process: Effective and efficient?

The IPPC Directive (61/1996) introduces significant policy innovations related to the policy content and procedural approaches applied to the adoption of environmental standards, their monitoring and implementation.2 It is the first time that EU environmental policies depart from media-specific regulatory approaches to pollution abatement by introducing an integrated approach that incorporates a single permit system covering all pollutant activities of industry, water, air, and land and the efficient use of energy. The IPPC Directive has therefore a strong procedural character. Instead of prescribing harmonised emission limit values (ELVs), it provides for co-regulatory processes to identify and diffuse best practices and techniques taking into account local environmental, technical and economic conditions. Single permits are to be based on BAT defined at sectoral and sub-sectoral level. The new permit system applies to installations from October 1999, while for existing ones no later than October 2007. Some new member states have been granted additional periods of grace for their existing installations that in some cases extend until 2012.3 The definition of BAT is delegated to ad-hoc co-regulatory sectoral and sub-sectoral Technical Working Groups (TWGs). The Directive also provides for an Information Exchange Forum (IEF) that comprises representatives of the member states, large associations and the Commission. IEF has an overview of the process, especially regarding potential impacts of the Directive on industrial competitiveness and employment and agrees on the thematic areas covered by TWGs. TWGs are designed to comprise a large number of actors such as the Commission, representatives from member state governments, enterprise associations, individual firms, environmental organisations, research institutes, universities, national and EU environmental agencies. These networks operate under the auspices of an EIPPCB in Seville that serves as the network coordinator/facilitator. They facilitate the diffusion of information on BAT based on benchmarking of best practices defined in periodically issued and updated Best Available Technology Reference Documents (BREFs). BREFs have no binding character. They rather serve as the indica-

[2] OJ L 257 October 10, 1996.

[3] These are Latvia and Poland until 2010 and Slovakia and Slovenia until 2011. These installations must receive a permit by the end of October 2007 but they will not be obliged to meet emission limit values based on the BAT until the end of transition periods.

tive basis for the adoption of ELVs to be included in single permits issued for each industrial installation covered by the Directive by national permitting authorities. The decentralised permitting system allows considerable leverage to domestic authorities to interpret BAT and define ELVs according to local environmental and geographical conditions, as well as the technical characteristics of the installation. The technical nature of BREFs and the lack of technical expertise on the part of the Commission to evaluate the compatibility of adopted BAT-based ELVs with broad environmental objectives denote the considerable policy relevance of TWG workings. The following sections will approach the nature of regulatory policy making in the framework of EIPPCB TWGs by focusing on two fundamental institutional properties, namely, the constellation of actors and the steering modes governing their interaction.

a. The actor dimension

Since their establishment in 1996 the EIPPCB TWGs have attracted the attention of a wide range of public and private actors from different countries and industrial sectors. In the first eight years of their operation thirty three (33) BREFs were discussed. These cover a wide variety of policy sectors and 'horizontal' activities such as energy efficiency, waste treatments (recovery and disposal activities), monitoring systems and economic cross-media issues.4 Information provided by the EIPPCB regarding the participants in various TWGs refers to a total number of 2027 public and private actors (Figure 1).5 Our analysis accounts for both the territorial and functional dimensions of participation in the TWGs by accounting for their national composition and type of actors participating in the process.

As for the territorial dimension of participation we account for two indicators. First, the number of participants in relation to population size of each member state. However, this indicator is to a certain degree misleading since it does not capture the significance of participation of actors from different member states. In order to provide an account of the incentives of domestic actors to participate in the Seville process, we therefore introduce a second indicator, namely the percentage of industrial facilities in each country that exceed emission thresholds specified in the IPPC Directive. National permitting authorities are obliged to report these emissions to a European Pollution Emission Register (EPER).6 The argument is straightforward: the higher the percentage of IPPC industrial plants in a member state that report emissions to the EPER (i.e. emissions higher than the IPPC thresholds), the higher the incentives of domestic actors are to participate in the process. Participation facilitates not only transfer of experience and expertise on available technological solutions to pollution abatement but it also safeguards the interests of domestic industry and averts potential BAT definitions that raise insurmountable adjustment costs. The following figure provides an overview of data on national participation rates, population and IPPC industrial plants exceeding these in each member state.

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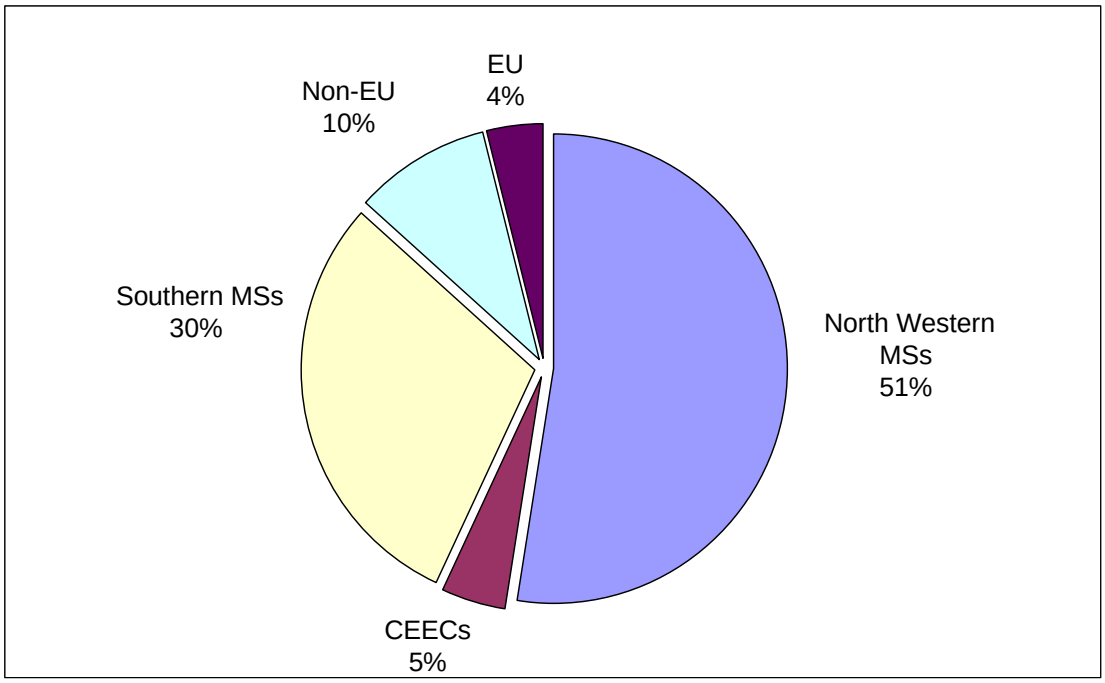
4 A list of BREFs is available at http://eippcb.jrc.es/pages/FActivities.htm

5 The EIPPCB publishes only the contacts of participants in the formulation of each BREF. Based on this information we constructed a database. Each participant is coded by nationality and type of organisation (s)he represents, namely Government, EU institution, national ENGO, EU ENGO, Research Institute, Individual Firm and national and EU sectoral associations. Research assistance by Gerasimos Kalogiratos on constructing this database is gratefully acknowledged.

6 EPER covers large and medium-sized industrial plants which exceed specified emission thresholds (Annex I of the IPPC Directive). This measure is significant since according to EPER, 'the threshold values have been fixed at a level that aims to cover about 90% of the emissions from facilities covered by IPPC' (http://www.eper.cec.eu.int/eper/).

Figure 1. National composition of EIPPCB TWGs[7]



Sources: Own elaboration based on information provided by the EIPPCB (http://eippcb.jrc.es/pages/FActivities.htm). Data on EPER facilities from European Pollutant Emission Register, 2004 Review, Final Report available at http://eper.cec.eu.int/eper/documents/EPER%20Review%20report,%20final.pdf, p.45. Data on IPPC facilities from European Commission, DG Environment, Analysis of Member States' first implementation reports on the IPPC Directive (EU 15), June 2004

Data presented in Figure 1 (see also Figure I, Appendix I) demonstrates that overall national participation to EIPPCB workings tends to be rather balanced.[8] Participation rates from member states with a percentage of industrial plants reporting emissions higher than the IPPC thresholds (above the EU average 20.9%) are considerably higher than mere population criteria would suggest. These are the cases of Austria, Portugal, Finland, Greece, Belgium and Germany. Only the UK's, Ireland's and Spain's (all with figures of highly emitting industrial plants above the EU average) national participation rates are significantly lower than their expected participation considering population size. Low-emitting member states also manifest positive relation of national participation rates to population size. This is the case of Sweden, Netherlands and Denmark. Only Italy's and France's (both with figures of highly emitting industrial plants lower than the EU average) national participation rates are below the expected considering their population size. Finally, participation of the CEECs with an overall rate of 5% of participants, although not particularly high considering the gravity of pollution problems due to outdated industrial infrastructure, is significant since it has started long before their actual accession to the EU. New member states participate in sixteen out of thirty

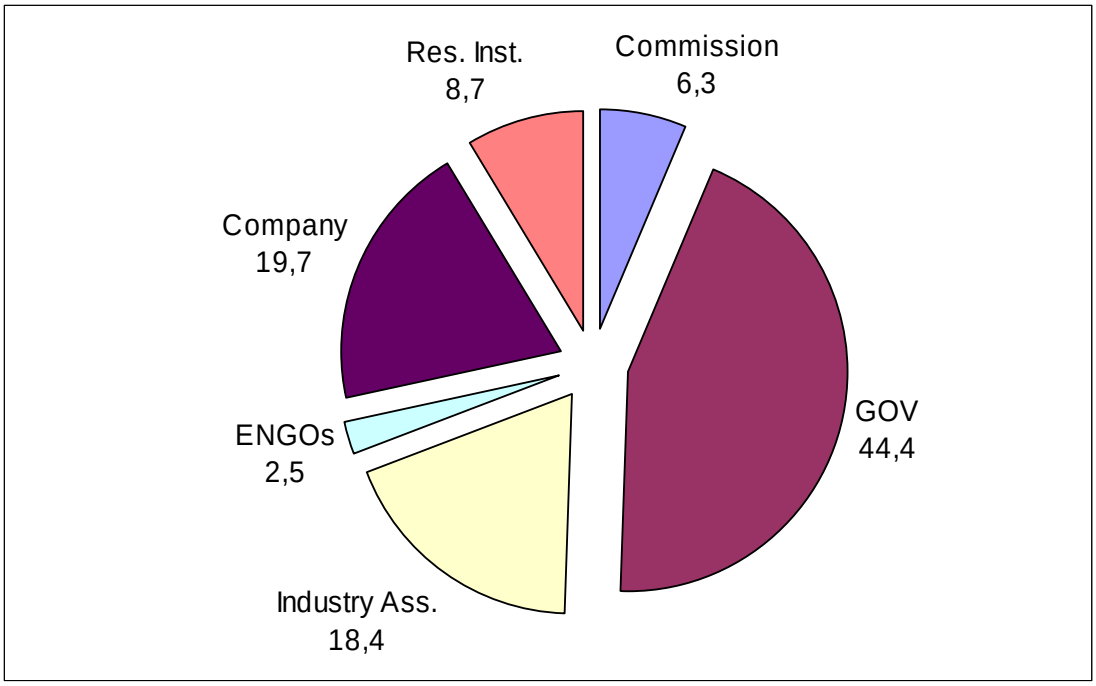
[7] We group together actors according to five categories: *EU* referring to representatives from EU institutions, European sectoral industrial associations and ENGOs operating as 'umbrella' organisations at the EU level; *Southern Member States* including government representatives, representatives from industrial sectoral associations and ENGOs from Italy, Spain, Greece, Portugal, Malta and Cyprus; *North Western Member States* comprising the above actors from Austria, Germany, the UK, Netherlands, France, Denmark, Finland and Sweden, Belgium, Ireland and Luxembourg; *CEECs* comprising actors from the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia and Slovenia; and, *Non-EU* that comprises EFTA actors and from that are not EU member states.

[8] Unfortunately no information on EPER facilities is provided, yet, for the ten new member states.

three TWGs that have started their work after 2001.[9] Their participation raises important questions regarding the effectiveness of the Seville process to facilitate a smooth adoption and adaptation of the new member states to the IPPC requirements.

On the contrary, an analysis of the functional composition of TWGs reveals much higher imbalances than the territorial one (Figure 2).

Figure 2. Functional composition of EIPPCB TWGs



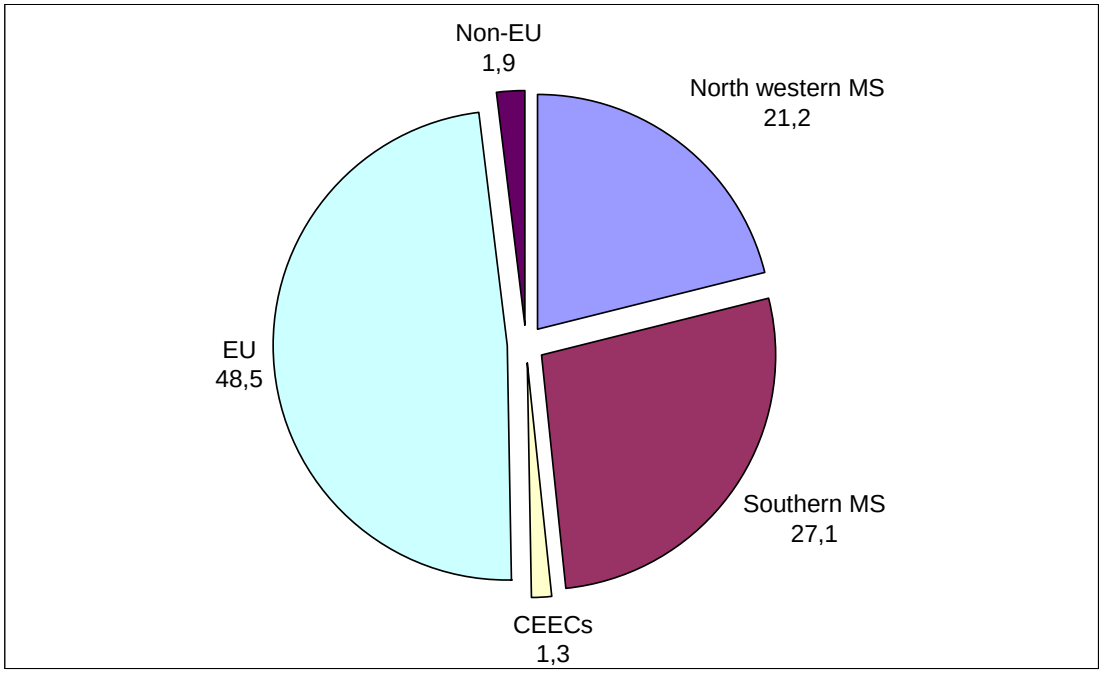
Sources: Own elaboration based on information provided by the EIPPCB (http://eippcb.jrc.es/pages/FActivities.htm).

The vast majority of actors participating in the EIPPCB TWGs are national government representatives (44.4%). The latter together with Commission representatives (6.3%) account for approximately half of participants. Individual firms with 19.7% and industrial associations with 18.4% are the second major category of participants. Research institutes with 8.7% and ENGOs are the types of actors with the lowest participation in the TWG workings. Availability of control data allows only comparisons between the participation rates of individual firms as a proportion of IPPC and high polluting (EPER) facilities in each member state. According to our estimations, only 0.8% percent of IPPC facilities and 3.9% of high polluting facilities registered with EPER participate directly to EIPPCB TWGs (see Figure II, Appendix I). National participating rates of individual firms are evenly distributed with the exception of Greece that manifests significantly higher levels of participation with 11.4% of IPPC and 45.1% EPER facilities respectively. Dutch with 16.3% and Belgian with 16.3% of individual firms also score high rates of participation as a percentage of domestic facilities registered with EPER.

[9] These TWGs are: the Large Combustion Plant, Large Volume Inorganic Chemicals – Amonia, Acinds and Fertilisers, Large Volume Inorganic Chemicals – Solid and Others, Slaughterhouses and Animal by-products, Food Drink and Milk Processes, Ceramics, Management of Tailings and Waste – Rock in Mining Activities, Surface treatment of metals, Surface treatments using solvents, Waste incineration, Waste treatments, Speciality inorganic chemicals, Orgnic fine chemicals, Polymers and Energy Efficiency (see http://eippcb.jrc.es/pages/FActivities.htm.

On the contrary industrial associations manifest more uneven distribution of participation (Figure 3).

Figure 3. Participation rates of Industrial Associations

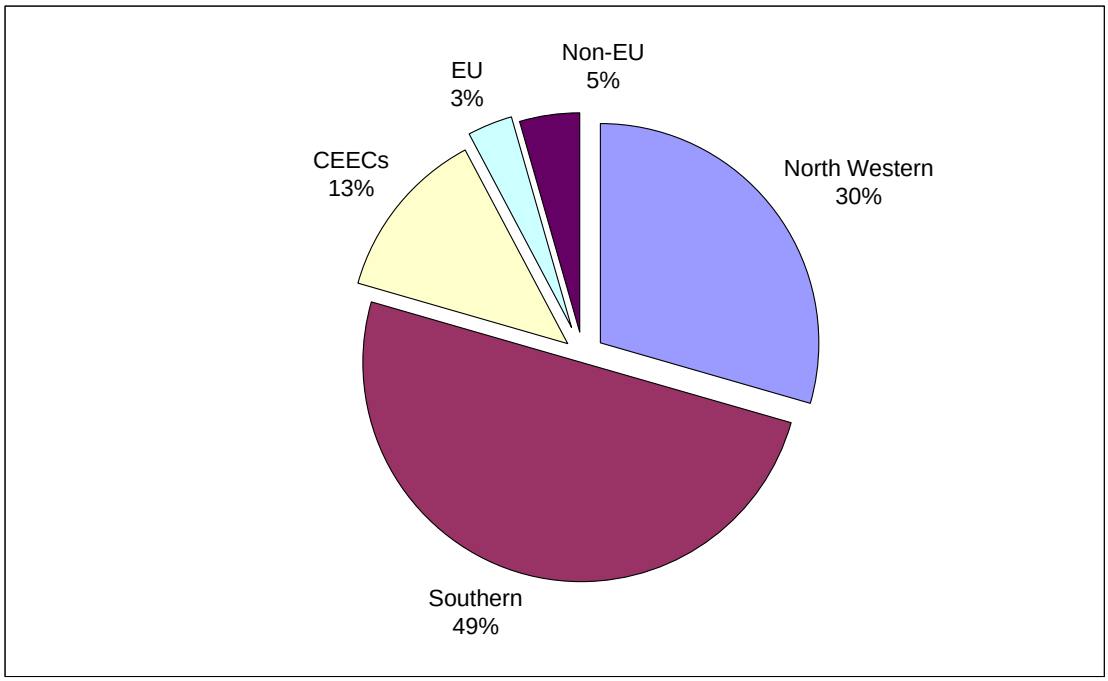


Sources: see figure 2.

The most notable outcome of our analysis regarding national participation rates of industrial associations is that almost half (48.5%) of participants in that category claim to represent industrial sectors at the EU level. The higher participation rates are attributed to industrial associations from Spain with 10.7%, Germany with 9.7%, Italy with 7.2%, France with 5.4%, and Greece with 3.2%. The rest of the member states score considerably lower rates of participation than the above five countries (see Figure III, Appendix I).

Research institutes' national participation rates also manifest a similar uneven pattern to the one identified above.

Figure 4. Participation rates of Research Institutes

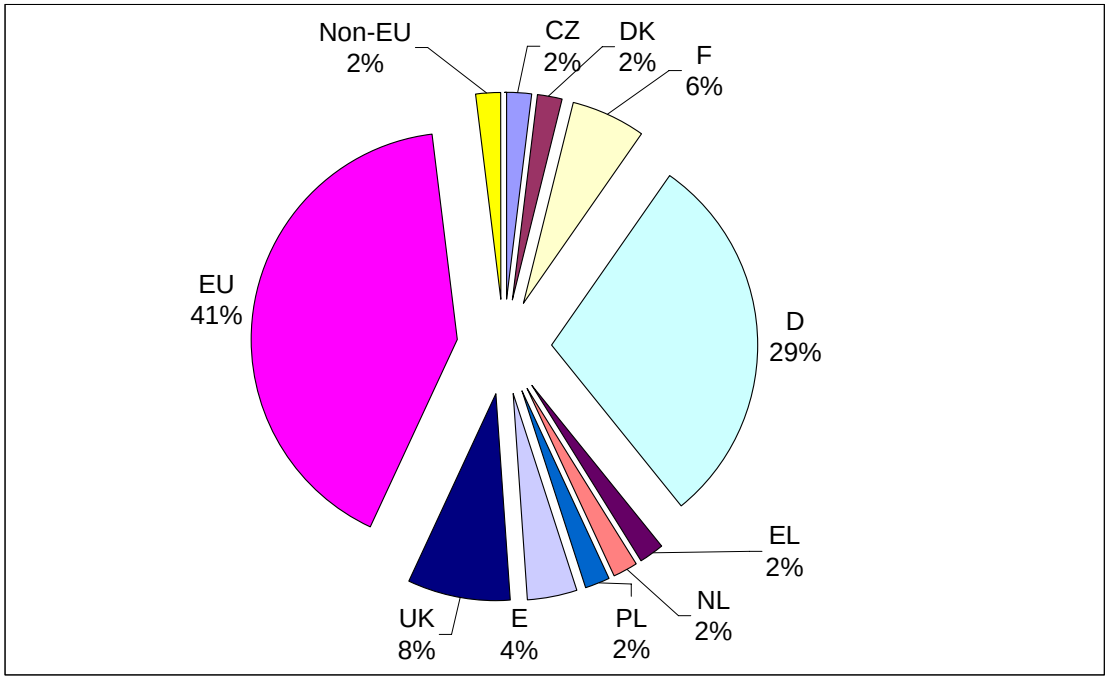


Sources: see figure 2.

Only Italian with 29.5%, Spanish with 13.1% and German with 11.9% research institutes score notable rates of participation to the EIPPCB TWGs. The rest of the member states score participation rates much below the three countries mentioned above. An exception to this pattern is participation of research institutes from the CEECs. In this category, CEECs with 13% score their higher rate of participation in comparison to all other categories of actors. Apart from Lithuania, all other countries participate to the TWGs with national rates similar even higher to the respective ones of old member states (see Figure IV, Appendix I).

Finally, ENGOs with 2.5% represent the smallest group of participants to the EIPPCB TWGs.

Figure 5. Participation rates of ENGOs



Sources: see figure 2.

ENGO participation is dominated by EU umbrella organisations (46%) most notably the European Environmental Bureau that represents 133 ENGOs based in all EU member states. National ENGOs account for the rest 57% of ENGO participants from only nine member states dominated by German organisations with 29%. The rest of member states score considerably moderate participation rates. ENGOs from the UK with 8%, France with 6%, Spain with 4% and Poland, Greece, Denmark and the Czech Republic with 2% are the most visible groups. Finally, another 2% of ENGOs correspond to participants from non-EU, mainly EFTA countries.

Summing up, the analysis of the actor dimension of EIPPCB TWGs reveals considerable imbalances in the functional composition of EIPPCB TWGs. Industrial actors (individual firms and industrial associations) are the most visible group of private actors and the second largest category after governmental representatives. On the contrary, both research institutes and ENGOs are rather underrepresented in the process. These imbalances are largely attributed to the framing of the policy problem addressed by the so-called Seville process. BAT identification is a technical issue that requires enormous amount of resources by private actors seeking to participate in TWGs.[10] The problem is particularly pertinent to ENGOs that face considerable barriers to participate in the process due to lack of essential resources in terms of knowledge and expertise in relation to BAT in different industrial sectors. [11] ENGOs often compensate for their weak resource base through alliances with environmental research institutes. However, their participation is also limited. These considerable functional imbalances raise the issue of winners and losers in the process of regulatory policy making in the framework of EIPPCB TWGs. Although industry is the most influential private actor in the process, it far from constitutes an actor with homogeneous preferences over the type of BAT adopted and the corresponding ELV thresholds. Our analysis does not indicate a systematic over-

[10] A report from an industrial association estimates the requirements for effective participation to the TWGs at approximately €1,000,000.

[11] The EEB has campaigned for financial support by the European Commission in order to compensate for imbalanced participation to TWGs (Hey 2000).

representation in the process by industrial associations and individual firms neither from high nor from low emitting countries. On the contrary, industrial actors' participation is much more balanced compared to all other types of actors. The multiplicity and heterogeneity of participants coupled with considerable disparities in the distribution of resources between them point to the pertinence of effective steering modes, namely rules that regulate network interactions and secure durable network functionality. The following section addresses these institutional properties of TWGs, namely the formal and informal modes of interaction between network participants and the institutional mechanisms of network coordination and arbitration in decision making.

b. Steering Modes

TWGs facilitate exchange of information between participants on environmental and economic elements of BAT in each industrial sector. Given the multiplicity of actors with divergent sectoral economic, national and political preferences and interests over the identification of BATs, it is remarkable that network interactions are governed predominately by informal rules with no formal conflict resolution mechanisms. The EIPPCB serves as the network moderator. It undertakes all administrative preparatory work.[12] There are neither majoritarian decision-making rules applied in cases of conflicts over the adoption of BAT emission thresholds nor formal arbitration mechanisms. On the contrary, there is an explicit attempt to seek consensual decision making through informal unanimity practices based scientific argumentation and persuasion.

At the informal level there are three steering mechanisms that arbitrate in cases of profound disagreements and conflicts over the content of BREFs. At the first instance, the EIPPCB plays a central role in reducing potential conflicts, especially during the process of drafting and revising the content of the BREFs. At this stage, the EIPPCB acts as a mediator by contributing to the finding of compromises in difficult issue areas. Through its political independence it manages to 'neutralise' disagreements by distilling the content of the BREFs from political statements and confining the discourse in purely scientific points related to the validity, accuracy and credibility of data (Sørup, 2000). Significant disagreements and political conflicts are also discussed in the IEF that comprises a higher level of representation. Moreover, the Commission retains a discretionary influence over the contents of the BREFs. The Commission's role in the process of applying BAT requirements by the member states is threefold. First, it retains the discretion to intervene and alter the contents of BREFs especially in cases where the application of agreed BAT-based ELVs has a negative impact on the competitiveness of industrial sector or employment. Second, the Commission retains the competence to introduce harmonised ELVs when a need for harmonization is identified. [13] Third, the Commission monitors the compatibility of national ELVs with those broadly defined in the BERF documents. It retains its enforcement powers (art. 226 TEU) in cases where the former significantly depart from lower ceilings included in the BREFs. It is still early to identify whether the Commission's ultimate discretion over the definition of BAT and the application of BAT-based ELVs functions as an element of 'shadow of hierarchy' in the policy process. However, this element of 'shadow of hierarchy' is of dubious real essence since it would jeopardise and de-legitimize the process.

The weak institutionalisation of network interactions and decision making rules in the framework of the TWGs has been heavily criticised by environmental organizations. It has been argued that, although it seems to favour consensus, in reality its operation is subjective to the unequal distribution of resources in favour of industrial actors (Hey, 2000). It remains to be

[12] The EIPPCB's staff comprises experts temporarily detached from national ministries and the Commission.

[13] The Commission publishes the results of BREFs in the Official Journal of the EU.

seen what the effects of the participation and steering modes analysed above are in terms of regulatory policy outcomes.

Regulatory effects: a 'race to the mean'?

The procedural character of the IPPC Directive and the considerable leverage provided to national actors to organise their domestic single-permit systems offers a number of interesting perspectives to account for its impact on national institutions and regulatory outcomes in different member states. However, in this paper we rather focus on the regulatory effects of participatory structures such as the TWGs, in terms of the level of 'indicative' regulatory standards adopted by the BREFs. Our analysis draws on information from the first six concluded BREFs on Cement and Lime, Chlor Alkali, Iron and Steel, Non-Ferrous Metals, Pulp and Paper and Ferrous Metals Industries. Since the vast number of BREFs have not yet been finalised our attempt is to identify some tentative trends regarding the regulatory effects of EIPPCB TWGs.

In all the BREFs mentioned above, reports conclude that the adoption of indicative emission range values reflects a compromise between divergent interpretations regarding what constitutes BAT in each of the above sectors. The definition of BAT is less controversial in cases where there are few BAT technologies. In the case non-ferrous metals and ferro-alloy industries for example, the main BAT alternatives are the introduction of semi-closed or closed furnaces that have better performance in energy recovery during the smelting process and reduced dust and fume emissions into air.[14] Despite the considerable costs involved in the adoption of this technology it is expected that a BAT will be gradually introduced during the replacing or upgrading existing open furnaces used by the majority of industrial plants in the sector.

More complicated and multifaceted problem is the identification of BAT for processes with multiple, tightly integrated production stages that correspond to different operational and technological solutions and quality of raw materials. In these cases, multiple indicators have to be balanced and consensus is relatively more difficult to achieve. Available reports indicate that in these cases compromises are achieved in two ways: a) by adopting a wide range of indicative emission values that correspond to BAT. This leads to the inclusion of the vast majority of IPPC plants in the sector; b) by a tendency to adopt solutions that converge along the 'mean' of emitting values derived from the data submitted in the TWGs. Both approaches have been applied in a combined way to the BREFs identified above.[15] The convergence to the mean of reported emitting values is justified by references to economic, technological and production parameters that condition the *availability* of best technologies in terms of percentage of industrial plants falling within indicative emission values.

The extent to which converge to the mean of environmental performance reflect a high level or, at least a higher level of environmental protection than the one potentially achieved through command-and-control regulatory approaches is highly contested. To a large extent it reflects different interpretations of BAT between the participants in the policy process. Experts delegated by environmental organisations denote that the current modes of conflict resolution have negative effects on the diffusion of novel environmentally friendly technologies (Lohse and Snader, 2000). Other participants point to the 'pulling effect' of this outcome for the heavily polluting facilities that have to raise their environmental standards in levels that

[14] For an overview of technical details please refer to Finkeldei 2000 or at the relevant BREF published at http://eippcb.jrc.es/pages/FActivities.htm.

[15] For e full discussion of extremely technical information regarding the Pulp and Paper, Iron and Steel, Cement and Lime and Chlor Alkali industries see (Schoenberger, 2000 and Suhr, 2000; Hagström, 2000).

are more realistic considering the amount of investments required for the introduction of novel production processes (Hägstrom, 2000).

Concluding remarks

It is still early to fully account for the regulatory effects of the so-called Seville process. It remains to be confirmed in the light of the forthcoming BREFs whether there is a systematic trend to compromise diverging preferences and interests over the level of indicative regulatory thresholds at the 'mean' of the various national sectoral environmental performances. Such a perspective raises a number of pertinent issues regarding the future of EU environmental regulatory regime. Given the already existing dichotomy between leaders/laggards in EU member state environmental performance, it would not be too precarious to assume that successive EU enlargements with the inclusion of countries with considerably lower production process environmental standards will drive compromises over the level environmental standards adopted in the framework of participatory networks downwards. In an ever more diverse union, the 'indicative' non-binding character of regulatory standards will potentially reduce compliance deficits, especially in member states that struggle with economic problems and outdated industries. In other words, the dilemma is between high regulatory standards causing compliance problems in certain member states and/or industrial sectors or lower non-binding ones more effectively applied at the domestic level. In this context, the role of regulatory networks for effective policy implementation through the transfer of experience and the diffusion of environmentally progressive technologies is crucial. However, the alleged 'political efficiency' and 'policy effectiveness' of co-regulatory networks still remains an empirical question. Further research on the ways in which indicative BAT-based emission thresholds are incorporated into domestic regulatory systems in old and new member states has to be conducted in order to form a complete picture.

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Appendices

Figure I – Data on national Composition of EIPPCB TWGs

MS	*National Participation rate (%)*	*Population %*	*EPER Facilities %*
A	2.3	1.9	32.5
B	4.2	2.3	23
Cy	0.1	0.2	
Cz	1.2	2.3	
DK	2.1	1.2	13.8
ES	0.3	0.3	
FI	2.2	1.2	29.3
F	6.6	12.9	19.9
D	11.6	8.2	23.8
EL	4.3	2.3	25.3
HU	0.8	2.3	
IRL	2.0	0.8	34
I	7.8	12.8	7.6
LV	0.4	0.5	
LT	0.0	0.8	
L	0.4	0.1	
MT	0.1	0.1	
NL	6.5	3.4	3.8
PL	0.8	8.7	
P	8.2	2.2	28.1
SK	0.2	1.2	
SV	0.7	0.5	
E	7.2	8.8	27.1
S	2.0	2.0	17.7
UK	9.0	13.1	38.4
EU	16.5		20.9
Non-EU	2.4		

Sources: Own elaboration based on information provided by the EIPPCB (http://eippcb.jrc.es/pages/FActivities.htm). Data on EPER facilities from European Pollutant Emission Register, 2004 Review, Final Report available at http://eper.cec.eu.int/eper/documents/EPER%20Review%20report,%20final.pdf, p.45. Data on IPPC facilities from European Commission, DG Environment, Analysis of Member States' first implementation reports on the IPPC Directive (EU 15), June 2004.

Figure II. Data on National Participation Rates of Individual Firms

MS	*Individual firms' Participation rates as a proportion to number of IPPC plants (%)*	*Individual Firms' Participation rates as proportion of firms registered with EPER (%)*
A	1.0	3.0
B	2.5	11.0
DK	0.5	3.8
FI	1.1	3.7
F	0.7	3.4
D	0.9	3.8
EL	11.4	45.1
IRL	0.2	0.6
I	0.4	5.7
L		
NL	0.6	16.3
P	1.6	5.7
E	0.5	1.9
S	0.5	2.7
UK	0.8	2.2
EU	0.8	3.9

Sources: Own elaboration based on information provided by the EIPPCB (http://eippcb.jrc.es/pages/FActivities.htm). Data on EPER facilities from European Pollutant Emission Register, 2004 Review, Final Report available at http://eper.cec.eu.int/eper/documents/EPER%20Review%20report,%20final.pdf, p.45. Data on IPPC facilities from European Commission, DG Environment, Analysis of Member States' first implementation reports on the IPPC Directive (EU 15), June 2004.

Figure III. Data on National Participation Rates of Industrial Associations

MS	*Participation Rate %*	*MS*	*Participation Rate %*
A	0.3	*LV*	0.0
B	0.8	*LT*	0.0
CY	0.0	*L*	0.0
CZ	0.5	*MT*	0.0
DK	0.5	*NL*	1.1
ES	0.0	*PL*	0.0
FIN	0.3	*P*	5.9
F	5.4	*SL*	0.0
D	9.7	*SV*	0.0
EL	3.2	*E*	10.7
HU	0.8	*S*	0.8
IRL	0.3	*UK*	2.1
I	7.2	*EU*	48.5
		Non-EU	1.9
			100.0

Figure IV. Data on National Participation Rates of Research Institutes

MS	*Participation Rate %*	*MS*	*Participation Rate %*
A	1.1	*LV*	2.3
B	1.7	*LT*	0.0
CY	0.0	*L*	0.0
CZ	3.4	*MT*	0.0
DK	1.7	*NL*	1.7
ES	0.6	*PL*	1.1
FIN	0.6	*P*	6.3
F	5.1	*SL*	0.6
D	11.9	*SV*	0.6
EL	1.1	*E*	13.1
HU	4.0	*S*	0.6
IRL	1.1	*UK*	4.0
I	29.5	*EU*	3.4
		Non-EU	4.5
			100.0