

Environment and the Single Market: The EU's Packaging Waste Directive

by:

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Recent assessments of EU environmental policy point to the innovative aspects of this area of Community policy making. Sbragia concludes an overview of environmental policy evolution in the EU with the observation that "environmental and economic dimensions of human activity will be linked in ways unimagined twenty years ago" (1993, 348). Likewise, Majone, in several recent articles, uses EC/EU environmental policy as an example of the Community's innovative and active agenda in the area of "social regulation" (1995, 9). European businesses are also considered to be heading out in front with environmentally friendly processes and products (Cairncross 1992; Gotschall 1996; Rosen and Sloane 1995), which undercuts the popularly held belief - and often highly politicized debate - over the competitive "disadvantages" to industry of stringent environmental controls (Vogel 1995a; 1995b).

Within barely over the past decade, this encouraging assessment represents quite a shift from previous appraisals: Rehbinder and Stewart, writing in the mid-1980s, state forthrightly "Community environmental policy is generally more conservative than innovative" (1988, 213). Other critics were less circumspect: Hey's evaluation (1989, 283) states that the "institutional structure of the EC leads systematically to suboptimal outcomes."¹ Brickman, Jasanoff, and Ilgen (1985), in concluding their study of environmental regulations in the chemicals industry, state that the kinds of voluntary approaches then being utilized in the UK (and now being used in recent Directives and Regulations) "[are] scarcely suitable as a model for international policy harmonization" (as quoted in Paterson 1991, 323).

In his recent probing of this apparent contradiction² between expectations of "lowest common denominator" outcomes in environmental policy at the EC/EU level, and the actual legislative output, which

¹Translation by the author.

²In examining theories of European integration to explain this innovation, Majone concludes "[f]rom an intergovernmentalist perspective, policy innovation in the EC is a **practical and theoretical impossibility**. ...Not even neo-functionalists, for all their interest in the leadership role of supranational institutions, thought it necessary to offer a theory of policy innovation at the European level" (emphasis added; 1995, 2).

has "gone beyond the level of protection provided by the majority of Member States to their citizens" (1995, 2-3), Majone suggests that the complex interplay of ideas, interests and institutions needs to be more fully understood (1993a, 1994). He cautions, however, to avoid a study of "ideas" in an instrumental fashion and rather to view the "relationship between problems, actors, policies and institutions [as] dialectic rather than monocausal or unidirectional" (1992, 9). Knill (1997) takes a similar approach in his discussion of the "co-evolution of policy instruments, institutions and policy beliefs" to illuminate influences which led to the "widening and deepening" of EC/EU policy in the field of environmental protection.

My paper will attempt to provide another case analysis of this constellation of factors in providing impetus for innovation in the area of environmental policy at the EC/EU level.³ The paper will focus mainly on the evolution of policy instruments in "the problem space" (Kingdon 1984) of increasing levels of waste generation and the potential trade distortions of national level efforts to stem this problem. The evolution of "policy beliefs" regarding environmental policy directions in an era of increasing globalization - both in an economic sense and in terms of awareness regarding the global impact of environmental degradation - will be explored via an examination of the "policy content" of both past and current legislative efforts in the area of waste management.

This paper will highlight the newest directions in waste management in the European Union: the Integrated Pollution Prevention and Control Directive 96/61 of 24 September 1996,⁴ the Packaging and Packaging Waste Directive 94/62 of 20 December 1994,⁵ the Eco-Management and Audit Scheme of 29 June 1993,⁶ and Regulation 880/92 of 23 March 1992 concerning the European Eco-Labeling Scheme.⁷

³I will use the dual nomenclature, EC/EU, when discussing those areas of the case which traverse the time frame during which the name change occurred.

⁴*OJ* L257/26, 10 October 96. Hereinafter cited as IPPC.

⁵*OJ* L365/10, 31 December 94. Hereinafter cited as Packaging Waste Directive.

⁶Regulation No. 1836/93 *OJ* L168, 10 July 93. Hereinafter cited as EMAS.

The primary purpose of the paper is to locate these new policies within the context of an evolution of policy beliefs and instruments resulting from a process of "policy learning" both across time and across national boundaries (Majone 1991; Radaelli 1995; Rose 1991). The paper will conclude with some thoughts on policy-learning that may occur as other nations, including the US, take "lessons" from the innovative policies now being implemented in the EU.

Policy learning

The "policy-learning" approach falls within the broader academic interest of the role of ideas in policy evolution (Blyth 1997; Haas 1992; Hall 1989; Majone 1991, 1992; Radaelli 1995; Rose 1991; Weir 1992). While the role of knowledge and ideas in the policy process can only be fully understood in the context of both interests and institutions (see especially Hecló 1978; Majone 1992; Sabatier and Jenkins-Smith 1992; Weir 1992), space constraints within the context of the conference paper format will limit the discussion to the evolution of "policy beliefs" regarding appropriate instruments for environmental protection policy, in particular as they affect the waste management sector. These beliefs, it will be argued, derive from both cross-national as well as temporal "learning" from experience with environmental policy and regulation since the 1970s.

Policy-learning is a way of understanding policy evolution and can take place by way of observations of cross-national or temporal experiences, and may result in inspiration, synthesis, or emulation of policy innovations, among others (May 1992; Rose 1991). Frequently, "policy failure" or, less dramatically, "dissatisfaction with the status quo" can serve as an impetus to search for new ways of doing things (Rose 1991). But the policy process is not so instrumental, nor rational, to allow for a distinct search to occur when the need arises. Rather, as Majone argues, "policy innovation often relies on pre-

⁷*OJ* L99/1, 11 April 1992.

existing models" (1991,79). Furthermore, the evolution of these other models may well themselves also be the result of a "lengthy stage of debate and persuasion" (Majone 1993a,7).

Taking this time horizon into account is important in capturing the "evolutionary" aspect of policy beliefs, which are least likely to change in a rapid fashion.⁸ One question which continues to be posed, however, concerns our understanding of the "conditions [under which] social learning and new ways of thinking become possible" (Majone 1992, 18). This has often been addressed in the context of a "window of opportunity": a convergence of policy, problem, and political "streams," allowing policy entrepreneurs to seize the opportunity to push through policy proposals (Kingdon 1984). Other factors include the policy community, ease of administration, and technical and economic feasibility (Majone 1993a).

Research on the interplay of ideas, interests and institutions in the EC/EU context has often investigated the intergovernmental aspects of dominant Member States as movers in policy developments, or, in a more pluralistic vein, the role of policy networks, which captures the role of interest groups and epistemic communities in the policy formulation process (see for example, Mazey and Richardson 1993; McLaughlin, et al. 1993; Richardson 1994). Recent studies of EC/EU environmental policy reflect these approaches, which attempt to account for "political influence" in accounting for policy outcome (see for example, Golub 1996).

In order to shed light on a process of policy-learning or policy innovation from an angle which gives **policy instruments and policy beliefs** priority (without denying the importance of interests and other "influence" factors as explanatory variables), this essay will give more attention to the substantive content of these new policies. This will provide a small contribution to filling a gap noted by Majone, suggesting that we will need a fuller understanding of policy innovation (at the EC/EU level) to illuminate why

⁸Indeed, the rationale for new policy directions may often be more fully developed after the fact (see Majone 1992).

particular policy directions were taken in light of a range of alternatives available to policy makers (Majone 1991; 1992; 1993a).

Policy instruments

The European Commission's draft proposal for a Council Resolution regarding a Waste Management Strategy (COM(96)399) of 3 July 1996 refers to economic, technological, and environmental changes which have taken place in the few years since the most recent Waste Management Strategy was adopted in 1990.⁹ The draft proposal of 1996 heavily emphasizes "prevention" of waste and "producer liability," and urges the adoption of "economic instruments" to regulate waste, from cradle-to-grave. This proposal was drafted in light of the experiences, legal developments, and institutional developments within the European Community in the area of environmental protection. While the concept of waste prevention has been present in the Community's Environmental Action Programs as well as its legislation on waste since the mid-1970s,¹⁰ it has not been realized in practice (Rehbinder and Stewart 1988, 203). Recent movement toward market-based, economic incentive oriented regulations, however, provides for a more optimistic appraisal that achievement of waste reduction via waste **prevention** as envisioned in COM(96)399 may be possible. The shift in policy instruments to attain these goals represents on the one hand, a cross-national policy learning, having taken the framework for several recent Regulations and Directives from existing national level regulatory efforts; and on the other hand, having learned from "policy failures" of past experience not only at EC level, but also from national (including USA) efforts

⁹"In September 1989, the Commission made a Communication to the Council and to the European Parliament on a Community strategy for waste management (SEC(89) 934 final of 18.9.89). Council and Parliament approved this strategy in their respective resolutions of 7 May 1990 (OJ C 122/2, 18.5.90) and 19 February 1991 (OJ C 72/34, 18.3.91)." See: CEC 1992.

¹⁰CEC (1992).

over the course of the past decades.

The main thrust of the legislation of the "first generation"¹¹ of environmental policies was to set emissions standards, often with technology-forcing aspects, for example, requiring the Best Available Technology (BAT).¹² While Liberatore (1991) follows Rehbinder and Stewart's (1988) discussion regarding the lack of technology-forcing aspects within EC legislation,¹³ the regulatory approach adopted was nevertheless based on a technological standard of achievement. In the case of motor vehicle emissions standards, for example, "[t]he relevant directives started at a relatively low level of control and were then upgraded several times and extended to other pollutants following **technological progress**" (emphasis added; Rehbinder and Stewart 1988, 215). Percival, et al. (1996, 155) state the relationship between "performance standards or emission limits" and technology in the following manner: "...many environmental regulations that are nominally performance standards...routinely devolve into **de facto design standards**" (emphasis added). This interplay between technological feasibility and the role of regulatory or policy instruments either in encouraging or in stifling more rapid development of emissions-

¹¹Ringquist (1993:5) uses the terminology "first," "second," and "third" generation in his discussion of the history of environmental policies. The "first generation" of environmental policy refers to the 1960s and 1970s, during which popular concern regarding environmental pollution coincided with dramatic examples, including the Santa Barbara oil platform blowout and the Cuyahoga River in Cleveland, Ohio catching on fire, leading to the enactment of the first sweeping federal environmental legislation. For an historical overview of environmental laws existing before the 1960s, see William Futrell, "The History of Environmental Law," in Celia Campbell-Mohn, ed., *Environmental Law: From Resources to Recovery* (St. Paul, MN: Westlaw, 1993), pp. 2-49. For historical overviews of European environmental policy developments, consult Russell Dalton, "The Environmental Movement in Western Europe," in Sheldon Kamieniecki, ed., *Environmental Politics in the International Arena* (Albany, NY: State University of New York Press, 1993) pp. 41-68; and John McCormick, *Reclaiming Paradise: The Global Environmental Movement* (Bloomington, IN: Indiana University Press, 1989).

¹²Or BATNEEC: Best Available Technology Not Exceeding Excessive Costs. This technology-forcing aspect is discussed in Percival, et al. (1996, 153 ff.) and Wallace (1995, 26-28).

¹³"Community environmental law does not normally attempt to force or even encourage technological change. Instead, directives select a particular strategy when and insofar as it is **technically feasible**" (emphasis added; Rehbinder 1988, 215).

reducing technology can help to illuminate both the weaknesses of previous emission-based legislation and the potential innovation-inducing impact of incentive based policies.

Setting standards often encouraged - at worst - "cheating" by firms to avoid the costs of implementation and - at best - (when properly implemented) adoption of currently existing technologies thereby lacking incentives for technical (process- or product-oriented) innovations (Houck 1994, 453). This is, to concur with Wallace's (1995, Ch.1) argument, not to characterize the new policy efforts as disregarding standard-setting, per se, but rather to provide a framework for understanding the more recent "hybrid" mix of both direct and incentive based policy approaches (see, for example, the discussion in Aahrus 1995). As both Aahrus (1995) and Wallace (1995) point out, the new generation of policy instruments seems to adapt both strategies to a more market-oriented regulatory process. This builds in not only incentives for innovation, but, by setting overall standards, provides a more stable regulatory environment, and thus, a more stable market environment, for firms to pursue above-compliance goals¹⁴ in order to reap market advantage from input savings as well as from consumer preference for "environmentally friendly" products (Barde and Smith 1997, 25; Cairncross 1992; Potier 1994; Rosen and Sloane 1995).

In addition to the standard-setting, and often technology-fixing (Aahrus 1995), orientation of the first generation environmental policies across OECD nations, these regulations were also designed to reduce emissions to the separate media: air, water, land (Long, 1991; Percival et al. 1996; Rehbinder and Stewart 1988; Ringquist 1993). The regulations were often point-specific, that is, directed to the reduction of emissions at the "end-of-pipe," and constituted a "clean-up" effort to diminish the damage to specific media created by the discharge of pollutants. While these regulations at both domestic and European levels were

¹⁴Barde and Smith (1997, 24-25) cite the following example: "A tax on sulphur emissions in Sweden was introduced in 1991 to stimulate reductions in sulphur oxides above those already achieved by regulation. The result was a reduction of the sulphur content of fuel oils by almost 40% beyond the legal requirement."

not without success,¹⁵ they were often costly, inefficient, and insufficient to adequately address the increasing levels of pollutants being discharged into the receiving environment (Kye 1995, 46-47; Long 1991, 5; T.Smith 1996). Dissatisfaction with the efficiency and efficacy of these regulations (Aahrus 1995; Ringquist 1993; Vogel 1987) led by the late 1970s and early 1980s to discussions regarding policy approaches designed to tap the potential of market forces for the protection of the environment. The quest for more efficient instruments was also part of a larger shift to "de-regulation" taking place in the US and in Europe at this time (Majone 1990).

Although often described as de-regulation, the regulatory changes taking place both in Europe and in the US can be seen to represent instead "regulatory reform" (Aahrus 1995; Majone 1993a; T.Smith 1996). As Majone argues, this "re-regulation" is not so much a response to "demands to return to laissez-faire" but rather for "better focused and more flexible forms of public intervention, and more attention to those areas of social regulation (environment, ...) which had been largely neglected by the welfare policies of the past" (1991,82). Aahrus further suggests that the "rhetoric" of de-regulation obscures the real innovation, namely "regulatory flexibility" (1995, 124). In the area of environmental policy, this refers primarily to a restructuring of environmental regulations to include, as mentioned previously, a combination of both standards and incentives, allowing industry flexibility implementing, indeed experimenting, with lowest cost methods to attain the regulatory goals (Barde and Smith 1997).

There are several specific tools that are part of the economic incentive based regulations: eco-taxes, tradable permits, voluntary agreements (backed up with government regulations if not met) (ibid.), as well as the kinds of instruments represented by the Directives and Regulations on waste cited previously:

¹⁵Success, that is, in cleaning up visible pollution. Dente (1995, 2) refers to the "spectacular success of the first years" and a National Academy of Public Administration Report (1995) "argues that after two decades of 'extraordinary progress in reducing pollution.... the time has come for the nation to change its approach to environmental protection'" (as cited in T. Smith 1995, 269).

EMAS, IPPC, eco-labels, and producer responsibility for packaging waste. Some initial experiences with these policy tools had already been acquired in the 1970s, most especially with the "bubble" concept of the US Clear Air Act, allowing firms to "offset" emissions (intrafirm) by reducing emissions from alternate sources within the firm to not exceed an overall emission allowance level. In addition, by the 1980s, partly as a result of "image" problems due to major industrial accidents such as Seveso, Bhopal, and Sandoz, firms in the chemicals industry had begun voluntary environmental audits. These audits were in part intended to reduce liability of the firms should an accident occur, but in the US context, at least, this self-reporting was institutionalized in the 1986 Superfund Amendments and Reauthorization Act (SARA), which included mandatory Toxic Release Inventory (TRI) reporting (Guinn 1994, 11). By 1991, the TRI was amended to include information on source reduction and recycling (ibid.), a development in line with the shared experience and practices of chemical industries in Canada (the "Responsible Care" program initiated in 1984), and promoted by the European chemical industry association (CEFIC) by the late 1980s (Franke and Waetzold 1996).

Thus, experience with incentive based regulations and voluntary self-regulation had been obtained by the late 1980s, generally with positive results.¹⁶ Much less positive, however, were the appraisals of direct regulation in terms of effectiveness and efficiency: "suboptimal" is again the kind of descriptor most frequently used in relation to these policy instruments (Aahrus 1995, 121). The accumulated evidence or awareness of perceived successes and failures of the various environmental policy instruments coincided with a broad based dissatisfaction with government intervention in the economy overall, to provide impetus to explore new policy instruments. It would not be until the late 1980s and early 1990s, however, that many of the proposals for incentive based policies would be brought into force at the domestic level of several EC/EU Member States.

¹⁶Barde and Opschoor report that "between 1987 and early 1993, the number of economic instruments had increased by 25-50%, according to country. ... Deposit-refund systems have also grown strongly, up by 35-100%, according to country" (1994, 23).

Policy beliefs

At the same time, an evolution in policy beliefs was taking place. In this usage of the term, I am referring to the process of "social learning" as described by May (1992) to mean a transition in understanding of the **causal** elements underpinning specific problems. Redefining environmental policy based on a "market-failure" model more specifically understood as an efficiency problem, would help to reorient policy thinking about the manner in which potential solutions should be developed (Ahlheim 1993; T.Smith 1996; Vohrer 1994). If misuse of environmental goods (clean air, clean water, raw materials, energy) could be attributed to a mis-pricing of these inputs, then redirecting policy response to restructuring the "price signals" to reduce environmental impact of industrial or commercial activities (production or consumption) would provide a more effective regulatory approach. Acceptance of these ideas regarding, in a more fundamental way, the **causal** mechanisms of environmental degradation contributed to a change in "policy beliefs," thus creating the greater interest in economic incentive based instruments which began to emerge in the late 1980s. If environmental degradation were understood as the result of market failure, the "deeper problem of external costs and thus of mis-pricing by the market system" could be addressed (T.Smith 1995, 272; van der Straaten 1993). The "fixes," Smith continues, would "go to the heart of the issue [and]... result in restructuring the market incentives, ... [and] in decentralized remedies driven by the markets themselves rather than by legislative fiats that fly in the face of market behavior" (273). Aiming the legislation at the market failure, and not at its symptoms (pollution, overuse of resources) "leave[s] the market to work out the ultimate result" (ibid.).

Institutional developments

This combination, or "co-evolution," of developments - learning from experience with respect to policy instruments, and changes in policy beliefs - was, in addition, embedded in a multi-level institutional

structure - in this case referring not only to the EC/EU level institutions, but also the larger international space of "policy communities" particularly in the area of international economics and trade relations. Two factors were at play simultaneously at the global level: the increased level of trade, creating potential trade barriers, or more importantly competitive disadvantages to firms operating in, or products produced in, countries with divergent national environmental standards; and the efforts of the OECD to stimulate cross-national learning and collection of data (Potier 1996,10; Rose 1991,18-19). The cross-national/international community of economists, providing, in particular, comparative analyses or at least data on national policy instruments, were contributing to the "availability of a rich pool of ideas and proposals" (Majone 1994,8). If, as Majone continues, "[t]he existing stock of ideas shapes the policy makers' responses to events by defining the conceptual alternatives from among which they can choose" (1994, 8), then this pool of ideas would be available for policy makers to assimilate and to adapt to national settings (Rose 1991) by the late 1980s and early 1990s.

Adding to this international level of policy evaluation was the open institutional structure of the European Commission (Majone 1993,4), and the "quasi-laboratory" of the Member States (Aahrus 1995; Rose 1991; Yost 1996). This combination of factors may not explain "why" a certain policy was selected (Majone 1991,104), but it can contribute to a broader understanding of the rich pool of alternatives available in terms of instruments, beliefs, and institutional settings which fostered policy learning. Institutionally, perhaps fortuitously, the instrument of the framework directive in the hands of supranational policy makers in Brussels allows for broad goal-setting, with national implementation providing as Aahrus (1995) and Yost (1996) suggest, the possibility of experimentation at the national level. Unlike the path-dependent evolution that Houck (1994) explores, the Commission can rather observe and select from among those examples that, because of proximity may have the most likelihood to succeed (Rose 1991).

While TSCA, RCRA, SARA and other US environmental policies have in the past set the frame

of reference, both in terms of available "policy instruments" and dominant "policy beliefs," during the first generation of environmental policy, it appears that the European nations, industries, and institutions are evolving rapidly toward new institutional structures perhaps better equipped to address the transboundary nature of environmental effects of production and consumption. Some of the factors are as straightforward a geographic location (Vogel 1993) forcing a more innovative stance in dealing the economic and environmental impacts of pollution.

Historical developments in EC/EU environmental policy

The evolution of policy instruments in the European Community dates back to the 1960s and 1970s, with the first EC efforts to regulate environmental matters occurring with Directive 67/548 of 27 June 1967 on classification, packaging and labelling of dangerous substances¹⁷ (Hildebrand 1992, 19). It was with the First Environmental Action Program of 1973, however, that the EC stepped into the environmental policy arena, along with recent US and other industrialized country efforts to establish environmental protection agencies, draft the first "state of the environment" reports, and produce comprehensive national environmental protection policy statements.¹⁸

The process of policy evolution can be seen in the approaches taken in the Environmental Action Plans adopted by the EC during the 1970s and 1980s. While the First and Second Environmental Action Programs (EAPs) stressed principles such as "polluter pays," "precautionary principle," and "prevention," Rehbinder and Stewart argue that in practice these EAPs remained on the one hand vague, and on the other, focused on producing legislation to regulate emissions into specific media, based on environmental

¹⁷*OJ L196/1*, 16 August 1967.

¹⁸The US National Environmental Policy Act was signed by President Nixon in 1970. Similar acts were signed into law in most other industrialized countries during the 1970s, and many of the first national "state of the environment reports" were also published during this decade (Jaenicke 1992).

quality or technology standards (1988, 58-59). Liberatore characterizes these first EAPs as "preventive/curative" (1991, 291), and despite the "rhetoric" (Aahrus 1995) of prevention, they remained, in practice, end-of-pipe attempts to reduce environmental impacts from pollution.

The Task Force on Environment and the Single Market (1990) was not the only voice warning of the environmental implications of the Single Market projected for "1992." Concern over the impact of trade on the environment has been widely discussed in several contexts: increasing globalization, North American regional integration efforts, as well as in the European Community context. The advent of the Single Market not only had the potential to increase economic activity, and therefore potential environmental impacts of production, transport, and waste creation (emissions to air and water; post-consumer waste disposal; industrial waste disposal). The Single Market would also potentially create massive trade in waste materials, with low cost disposal sites attracting inflows of wastes from countries which had instituted more stringent and costly disposal regulations. This "institutional" development was coupled with dramatically increasing rates of waste production in both the industrial and post-consumer areas.¹⁹

Insert tables 1, 2, and 3 here

While environmental impacts of production can be transboundary in nature, the level of response during the 1960s and 1970s was primarily domestic. As nations began to diverge in the level of legislated environmental protection, differences in the costs of producing goods also began to diverge. In a world of increasingly globalized trade, and especially in regions of increasing economic integration, these differences in production costs can create non-tariff barriers to trade. One of the first areas in which non-tariff barriers to trade induced policy change cross-nationally was in the area of chemicals regulations. The

¹⁹OECD Washington Waste Minimization Workshop 1996.

passage of the Toxic Substances Control Act of 1976 by the US created pressure on European governments as well as the OECD to adopt the more stringent US regulations to the international level, in order to protect international trade in chemicals (Paterson 1991).

EC/EU waste management policy

In terms of policy instruments, EC policy relative to waste has relied mainly on legislation regarding **disposal**: increasingly stringent regulations on incinerator emissions, shipments of waste, and most recently, proposals regarding landfill regulations and civil liability (Salter 1992; Schmidt 1992). In light of the "1992" proposals, increased attention was given to the opening of the Internal Market for waste trade within the EC, with the potential for wastes being shipped to the Member States with the least restrictive disposal regulations. Policy instruments, nevertheless, remained focused on restricting disposal options, including, by the early 1990s case law (Commission v Belgium, Case 2/90) setting the "proximity" (Bering 1996) and "self-sufficiency" principles (Jans 1994).

Another principle which was ultimately to be adopted into the Treaty on European Union, is that of the "precautionary principle" (Wilkinson, 1992). If, as Majone suggests, ideas and innovations often need a long lead time before they will be used in policy formulation, then the "precautionary principle" had already had a long life in German environmental law. Nevertheless, commentators wondered if adoption of this principle into the TEU would be translatable into practice, as moving from principle to practice would involve the "co-evolution" of policy instruments of implementation (ibid.). Policy beliefs would need to emerge which might support a search for different instruments, once the causal factors regarding waste generation were understood in a different formulation.

As had occurred in the chemicals sector - with industries urging the EC and OECD to adopt the US TSCA standards (Paterson 1991) - industry concern began to mount as waste management policies began

to more markedly diverge. Already the Danish bottles case within the EC had signalled a priority toward environmental protection by the ECJ. The proliferation of municipal and household recovery and recycling schemes, along with new packaging regulations being promulgated in a variety of countries would drive industries with trade interests to press for more uniformity.

Table 4 here

In the EC/EU, this took the form of support for responsibility for packaging labelling schemes to be given to the *Comite Europeen de Normalisation* (the European Standards Organization, CEN). At the same time, multinationals in Europe began to restructure their own processes, products and packaging to the most stringent level to attain scale efficiencies, and, in the process, gain market advantage due to a "greener" image (Cairncross 1992; Gotschall 1996; Rosen and Sloane 1995). It would also, in fact, position Europe's firms ahead in the marketing of environmental technologies, including recycling technology (Goldfine 1994; Reynolds 1995; Wallace 1995).

The rhetorical and practical aspects of the EMAS, IPPC, and Packaging Waste, and Eco-Labeling legislation are aimed less at harmonization of process or product standards, but are rather framework documents that will set into motion, primarily voluntarily (except for the packaging waste requirements), new methods of environmental accountability. These Directives and Regulations reflect a wider understanding regarding the interrelatedness of environmental impacts, namely the cross-media aspects of pollution. The legislation and the explanatory memoranda exhibit an evolution in thinking about both causal mechanisms driving environmental degradation from production and consumption, and instruments which take an incentive based approach to bringing both producers and consumers to new awareness of the "cost" to the environment of our activities. These new laws represent policy learning in its many guises, as listed above: inspiration, synthesis, and emulation of existing policies. Indeed, the Packaging

Waste Directive could be seen to have benefited from the "policy failure" of the recent German scheme, insofar as the German Packaging Ordinance very successfully brought about recycling activities, but the market signals were such that similar efforts at packaging waste reduction have been slower in evolving (Goldfine 1994; Weiner and Tostman 1991).

All of the legislation discussed in this paper share an approach that invites both producers and consumers to assess the overall impact of goods on the environment, for example, the so-called "packaging chain" which stems from the raw materials inputs and the energy used in the production process to the final disposition of the materials at the time of disposal. The voluntary eco-management and audit process has already made industrial managers aware of areas in which by reducing environmental impacts, they will also reduce their costs (Barde and Smith 1997, 26). While the "life-cycle analysis" is still not without problems (see OECD 1994; Venner 1993), the incentive to improve the "costing" of environmental inputs and impacts of products and production processes, will likely provide yet further insights into areas where savings may be made. In the area of tradable air pollution permits, for example, the "pricing" of emissions has led to rapid development of sophisticated emissions monitoring equipment, as each unit of emissions now has a "price" for the firms (Barde and Smith 1997, 26; Hays 1995, 18). The US has taken a lead in using the tradable permits, and likewise is leading in the production and international marketing of the new monitoring equipment (Hays 1995, 18).

As Vogel (1995a) and Stewart (1995) have recently argued, increased trade does not pose a barrier to either the attainment of high environmental protection goals, nor to the use of economic instruments to achieve these goals. If prior examples of "trading up" (Vogel 1995b) are considered, such as the chemicals industry previously mentioned, or in the case of the catalytic converter adoption in the EC (Arp 1993), or indeed, in the pressure toward a phase-out of ozone depleting chemicals (Haas 1992), industrial innovation can lead to greater efficiency of internal operations, and products which are less environmentally damaging.

Barde and his colleagues argue that providing the incentive to industry in a "carrot and stick" manner, can not only bring about innovative processes and products, but such policy instruments as the EMAS can also provide an awareness to managers, thus diffusing "policy beliefs" in this sense to the wider policy community of both the regulators and the regulated (Barde and Opschoor 1994; Barde and Smith 1997, 24).

The role of the consumer can also be quite powerful. On the one hand, the implementation of these Directives and Regulations institutionalize the "polluter pays" principle, which means that the consumer will face higher prices, and firms may lose market share. This incentive along pricing lines, is coupled with the "voluntary" EMAS provisions, which can form the basis for awarding of the eco-label,²⁰ adding further to consumer awareness, and thus pressure on industries to shift from environmentally damaging practices (Hinnels and Potter 1994; Kye 1995). Devising an eco-label award to be given by an independent standard-setting authority will remove the process from the throes of politics, while attainment of the label itself will use market pressure to achieve the most efficient means of production.²¹

Conclusion

The Directives and Regulations discussed in this paper - EMAS, IPPC, Packaging Waste, and the Eco-Label - will doubtless create disorder in the short-term, as firms restructure product lines and production processes (Cairncross 1992). As Bill Long (1991, 7), Director of the OECD Environment Directorate, as well as Barde and Owens (1996, 16) have pointed out, the restructuring process may create short term costs, indeed losses, but the larger goal of "sustainable development" - a "policy belief" given

²⁰Devising a standard for the eco-label awards is intertwined with the development of more harmonized standards, and more agreement in the methodology of life-cycle analysis. See: Palomares-Soler and Thimme (1996); Verhoeve and Bennett (1994).

²¹See Majone (1995, 36-27) on the potential role for independent regulatory agencies.

lip service, if not indeed shared by the larger policy community - is a long-term strategy. Attaining the restructuring to reach this goal will take time. Beginning the process at the beginning, namely creating incentives to re-evaluate the nature of production, and the full impacts - as specified in the IPPC Directive - illuminates the "co-evolution" of policy instruments with larger shifts in policy beliefs regarding both the nature of the problem - a mis-pricing in the "market" of environmental inputs; relying on the same "market" forces to harness the innovative energies of those engaged in both basic and applied research²² holds great promise. Despite Wilkinson's concern that "developing policies to counter an environmental threat before its cause has been established beyond doubt can be both technically and politically problematic" (1992, 224), it would appear that this new set of legislative innovations may provide the tools for implementation: the permitting process envisioned in the IPPC, the specific guidelines of EMAS, establishing the first eco-labels (for example Decision 96/13 of 15 December 1995²³), and setting specific targets for packaging waste reduction in the Packaging Waste Directive.

Allowing the Member States to implement the Directives will allow flexibility and experimentation, with the "opportunities that it offers for ... greater innovation that may be duplicated at the federal level" (Yost 1996, 329). This would approach Majone's suggestions in his discussion of "relational contracting" (1995, 18-22) (with lessons for "students of EC policy-making" as well (ibid. 22)). He argues that this concept is indeed embedded in the "structure of the founding treaties [of the EC]," and that past leaning towards ever more specific directives "blurs [this] distinction" (ibid., 21). The new Directives and Regulations discussed in this paper may be structured to provide the flexibility that both Majone and Yost (ibid.) argue would be advantageous. The past decade's experimentation, in "lead" countries such as

²²Soete and Arundel discuss the process of innovation, and emphasize that flexibility and stability are essential components allowing for the necessary trial and error processes of "discovery" to unfold (1995).

²³*OJ L4/8*, 6 January 1996.

Germany and the Netherlands, and also the United Kingdom, with its recently adopted Integrated Pollution Control policy (Emmott and Haigh 1996) have provided a "rich pool of ideas" indeed.

With the "co-evolution" of policy instruments, policy beliefs, and institutional developments within the EU moving in the direction of more comprehensive environmental protection, "cradle-to-grave" and cross-media approaches, reflecting an emerging consensus on the need to pursue a path "towards sustainability," the institutional setting of policy-making in the EU may well provide the most fertile setting for the diffusion of new ideas and debates. As Candice Stevens notes in her recent appraisal of trade and environment, harmonization, mutual recognition, process standards, economic instruments, and life-cycle management approaches will be among the "substantial array of policy instruments and ... methods" to address this increasingly contentious area at the global level (1993, 47-48). Her plea for "new ways of thinking about trade and environment" (*ibid.*, 48) may be, to use Houck's colorful language on policy evolution, "crawling out of their caves" (Houck 1994, 403) in the emerging policy space of the EU. These new directions support Majone's assessment that the EU may well be "an increasingly rich space of social regulatory policies and institutions" (1992, 32). As Haner concludes, "sound implementation of the EU Packaging Directive ... is a step in the right direction" (1995, 2226). If these Directives and Regulations are, indeed, translated into practice in a way that lives up to their potential, the EU may well be able to provide "lessons" far beyond its borders.

Table 1: Generation of municipal waste^a and packaging waste^b (1000t)

	<u>1980</u>	<u>1985</u>	<u>1990</u>	<u>1995</u>	<u>of which packaging</u> (early 1990s)
France^c	16,930	18,700	20,420	20,500	6,900
W. Germany	21,417	19,387	21,615		8,000
Italy	14,041	15,000	20,000	20,033	
Netherlands	7,050	6,357	7,430	7,602	2,708
United Kingdom^c	15,500	17,000	20,000		3,559 ^d
EU 15	112,000	117,000	143,000	147,000	
USA	137,350	149,144	177,539	187,790	64,000

Notes for Table 1:

a. OECD (1995, 159); b. *ibid.* 156; c. Household waste figures; d. Marsh and Buckley 1995.

Table 2: Municipal waste generation per capita (kg/capita)^a

	<u>1980</u>	<u>1985</u>	<u>1990</u>	<u>1992</u>	<u>packaging waste^b</u> (kg/capita)
France	310	340	360	360	181
W. Germany	350	320	340		125
Italy	250	260	350	350	188
Netherlands	500	440	500	500	156
United Kingdom^c	310	340	350		134
EU-15	340	350	390	400	154 ^d
USA	600	620	710	730	210

Notes for Table 2:

a. OECD (1995, 159); b. OECD (1992, 16); c. Household waste figures; d. This figure reflects EC-12.

Table 3: Disposal of municipal waste (early 1990s)^a
(in 1000t)

	<u>total</u>	<u>incineration</u>	<u>landfill</u>	<u>% landfilled^b</u>	<u>recycled</u>	<u>% recycled^b</u>
France	20,500	7,600	9,500	46%	740	3%
W.Germany	21,615	6,039	14,219	65%		
Italy	26,600	2,100	22,800	85%	1,700	6%
Netherlands	7,602	2,500	3,610	47%	175	2%
United Kingdom^c	20,000	2,500	14,000	70%	1,000	5%
USA	187,790	2,993	117,028	62%	34,929	18%

Notes for Table 3:

a. OECD 1995, p. 163.

b. Author calculations.

c. 1989 figures.

Table 4: Recovery and recycling targets in selected EC countries (circa 1992)^a

	Recovery		Recycling		Incineration with energy recovery	
	target date	amount	target date	amount	target date	maximum allowed
Belgium	1995	100%	1995	28%	1995	64%
			2000	46% average for all materials	2000	42%
Walloon			1995	80% metals		
				75% glass		
				30% plastic		
				25% paper/cardboard		
Denmark			2000	50% packaging waste		70%
				100% beer, sparkling water bottles reusable		
Italy			1992	50% glass and metal		20% (plastics)
Netherlands	2000	100%	1992	40%	2000	40%
			2000	60% packaging		
				80% glass		
				60% paper/cardboard		
				50% plastics		
			75% metals			
United Kingdom			2000	50% of the recyclable component of household waste		

Source: Van Goethem 1993.

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