

# Integrated Product Policy: an Opportunity for Environmental and Economic Policy

As a concept in environmental and economic policy Integrated Product Policy (IPP) in Europe aims to reduce the negative environmental effects of products throughout their entire life cycle using innovative and marketable solutions. A further aim is to strengthen the competitiveness of European firms in environmentally friendly products. Despite the delays in developing an appropriate EU framework concept, greater commitment by Germany to its own national concept is meaningful and necessary. Successful approaches in other EU member states have shown how important cooperative policy instruments are in promoting innovation.

## Greater product orientation in environmental policy

In February 2001 the European Commission published a Green Paper on Integrated Product Policy, proposing a strategy to redirect and strengthen product-oriented environmental policy.<sup>1</sup> A follow-up White Paper on the specific design of an implementation strategy is still awaited.

In the Integrated Product Policy concept products are regarded as causing environmental pollution and consuming resources. The objective is to reduce the negative environmental impact of products throughout their entire life cycle and not to focus only on certain aspects, such as resource extraction, individual stages of the production process, product use or waste disposal.<sup>2</sup> The integrated approach – starting with the design of the products – is intended to prevent damage to the environment being shifted along the life cycle. That can happen if, for example, the use of certain materials in products, while entailing lower consumption of resources, later causes greater noxious emissions at the disposal stage.

<sup>1</sup> European Commission: 'Green Paper on Integrated Product Policy', Brussels 2001. Cf. <http://europa.eu.int/comm/environment/ipp/2001developments.htm>.

<sup>2</sup> Focusing on the entire life cycle of products is new on the level of a policy concept, but there have been individual product-related environmental policy instruments since the 1970s, such as the environmental 'Blauer Engel' label in Germany.

Another essential feature of Integrated Product Policy is developing effective sets of instruments and not seeing individual policy measures in isolation. This concept should help to shape advantageous economic framework conditions for innovative and environmentally aware companies. The instruments include improving the information base for companies and promoting cooperation between companies along product life cycles. In addition, the state should stimulate voluntary activities and act as intermediary between interest groups.

## Integrated Product Policy encourages innovation and strengthens competitiveness

Integrated Product Policy is strongly concentrated on innovation and economic development in the EU single market.<sup>3</sup> There are two aims: firstly to support innovative solutions to environmental problems. Here, orientation towards the entire product life cycle is regarded as a flexible approach that can offer companies scope for developing efficient solutions to reduce the negative environmental impact of products.<sup>4</sup> Secondly, Integrated Product Policy is also pursuing an economic objective, by endeavouring to support European companies as international market leaders in the successful development of environmentally friendly products.<sup>5</sup>

This dual aim is to be achieved by giving companies incentives to concentrate more on developing and marketing environmentally friendly products. Such incentives will widen the scope for reducing production costs, for instance by increasing eco-efficiency, building up a positive brand image, opening up new markets or market shares and preventing further state regulation in the environment field.<sup>6</sup>

In view of its economic objectives, Integrated Product Policy is regarded in Germany not only as part of environmental policy but also as an industrial policy

<sup>3</sup> Integrated Product Policy should not, however, be confused with corporate product policy, which is part of corporate management. Nor should it be equated with direct state intervention in companies' product policy, as the similarity of the names might suggest, and as is feared by some companies. Cf. Ernst & Young: 'Integrated Product Policy. A Study Analysing National and International Development with Regard to Integrated Product Policy in the Environment Field and Providing Elements for an EC Policy in this Area. Executive Summary for the Final Report 1998.' <http://europa.eu.int/comm/environment/ipp/ippsum.pdf>.

<sup>4</sup> BDI: 'Die Rolle der Wirtschaft in der integrierten Produktpolitik', in: *Ökologisches Wirtschaften*, no. 6, 2000, p. 16.

<sup>5</sup> Ernst & Young, loc. cit., p. 2; European Commission, loc. cit., pp. 6 and 20.

<sup>6</sup> European Commission, loc. cit., p. 11.

that is promoting product-related innovations in companies. German firms have development chances here in innovation competition, especially in building up lead markets for environmental innovations. Thus, the concept fits into the idea of ecological modernisation as a strategy for a 'pioneering policy'. Ecological modernisation is an essential component of the German Government's coalition agreement for the present legislative period.<sup>7</sup>

Orienting Integrated Product Policy to economic and environmental aims creates a tendency to seek primarily 'win-win' solutions. That means, for example, developing products that have both positive environmental properties and good market prospects. Solutions of this kind are favoured in the EU Green Paper and they are also among the relevant preliminary considerations in Germany.<sup>8</sup>

Nearly all the IPP instruments proposed are intended to stimulate innovation activity in companies in regard to the environmental properties of their products. This applies both to financial support for companies' product research and development and to cooperation between actors along the product life cycle.<sup>9</sup> There are also a number of instruments that indirectly promote environmentally friendly product innovation, for instance by supporting the provision of information on the effects of products on the environment. Product life cycle analyses are of particular importance here.

A disadvantage of product-related policy is seen in that product innovations typically progress in relatively small steps. That does not accord with the requirements of ecological structural change, which also needs radical innovations that will fundamentally change whole (product) systems through 'transition management' or make them obsolete.<sup>10</sup> Hence, the focus should be more on the functions of the products rather than the products themselves. This would enable a wider search to be made for alternatives that save energy and materials and are low in pollution.

---

<sup>7</sup> M. Jänicke and A. Volkery: Agenda 2002 ff. 'Perspektiven und Zielvorgaben nachhaltiger Entwicklung für die nächste Legislaturperiode.' A brief report for the Friedrich Ebert Stiftung and the Heinrich Böll Stiftung, Berlin 2001, pp. 15 and 29; Coalition Contract between the SPD and the Alliance 90/Green Party of 16 October 2002.

<sup>8</sup> Bund-Länder Arbeitskreis (BLAK): 'Steuerliche und Wirtschaftliche Fragen des Umweltschutzes: Positionspapier zur Stoff- und Produktbezogenen Umweltpolitik', Berlin 2001, p. 23.

<sup>9</sup> One example of innovation promotion is the initiative 'GROWTH. Innovative Products, Processes and Forms of Organisation' of the 5th EU research framework programme, operating until the end of 2002. It can be expected that the 6th programme will make similar promotion possible. Another means of directly promoting product innovation is the product panel, a cooperative instrument developed in Denmark. Cf. European Commission, loc. cit., p. 26.

<sup>10</sup> M. Jänicke and A. Volkery, loc. cit., p. 30.

## Product-related policy instruments – a survey

There are already a large number of product-related policy instruments in many EU member states and at European level. The Netherlands and the Scandinavian EU countries in particular not only have individual instruments; they have also combined them into Integrated Product Policy concepts.<sup>11</sup> By contrast, Germany has some instruments, but an official national concept is still awaited.<sup>12</sup> The EU itself has created a large number of product-related framework regulations since the 1990s. Examples are in product information, standardisation, recycling and in connection with the ban on dangerous substances in products. However, most of the EU member states are still not practising an active Integrated Product Policy.

Admittedly, hardly any new instruments of Integrated Product Policy are being proposed. Exceptions are the idea of a lower rate of value added tax on products bearing the European Eco label, and the Danish approach of product panels.<sup>13</sup>

Table 1 gives a general classification and examples of product-related instruments that already exist or are in preparation. It is remarkable that many of these instruments are designed to reduce negative effects on the environment in the product-use phase and in connection with product waste.

Table 2 lists important product groups and sectors to which IPP instruments already apply in selected EU countries or are under discussion. Most frequent are product-related regulations on electrical and electronic products, cars and packaging. Regulations covering these areas are already in force throughout the EU. The listed product groups and sectors are largely determined by the country-specific regulations.

---

<sup>11</sup> The first national Integrated Product Policy concept was developed in the Netherlands in 1993; its main aim was to improve environment-related product information. Denmark started to work out a concept in 1995 that has since been successively further developed and now covers a wide range of mainly cooperative policy instruments. There is a remarkable initiative by Denmark, Iceland, Finland, Norway and Sweden to draft a joint framework concept for Integrated Product Policy within the Nordic Council that allows a wide scope for individual national approaches and is intended to advance the development of Integrated Product Policy on the European level. Cf. Dutch Ministry of Housing, Physical Planning and Environment (VROM): 'Policy Document on Products and the Environment', The Hague 1993; 'Nordic Council of Ministers: Proposal for a Common Nordic IPP', Copenhagen 2000.

<sup>12</sup> On the initial work see Bund/Länder-Arbeitskreis (BLAK) loc. cit.; IÖW: 'Innovationen durch die Umweltpolitik – Integrierte Produktpolitik (IPP) in Deutschland', report commissioned by the Federal Ministry of the Environment, Heidelberg 2000.

<sup>13</sup> European Commission, loc. cit., pp. 13 and 26.

Table 1

## Classification and Examples of Product-related Instruments in Europe

Category	Examples
Product information	<ul style="list-style-type: none"> <li>– Eco labels, e.g. the European Eco label and the 'Blauer Engel' in Germany</li> <li>– Voluntary environmental declarations on products</li> <li>– Promotion of the further development of product life cycle analysis</li> <li>– Obligations for labelling of goods, declaration of contents, information on disposal</li> </ul>
Monetary incentives	<ul style="list-style-type: none"> <li>– Producer responsibility through obligation to take back end-of-life products, e.g. vehicles and electrical appliances, waste packaging</li> <li>– Taxes on products</li> <li>– Grants for research and development (product innovations)</li> </ul>
Voluntary measures and cooperation	<ul style="list-style-type: none"> <li>– Voluntary agreements to take back end-of-life products, e.g. vehicles, graphical paper<sup>1</sup> in Germany</li> <li>– Standardisation of products and product components</li> <li>– Promotion of product-related corporate environment management</li> <li>– Product panels</li> </ul>
Statutory regulations	<ul style="list-style-type: none"> <li>– Ban on particularly harmful substances in products</li> <li>– Approval procedures for products containing dangerous substances</li> <li>– Recycling or re-use quotas</li> </ul>

<sup>1</sup> Graphical paper includes newsprint, magazine, stationery and copying paper.

So far hardly any detailed evaluations of the economic and environmental effects of product-related instruments have been made. That may partly be due to difficulties in compiling data. Secondly, instruments that have a more long-term and indirect effect are intrinsically difficult to assess. Nevertheless, a thorough evaluation of these instruments is essential. However, important information on the design of an Integrated Product Policy can also be gained from the experience of individual EU countries in implementing policy instruments.

### Product-oriented Environmental Management (POEM)

The approach, introduced in the Netherlands in 1993 obliging producers to publish environmental information on their products, met with widespread resistance from companies. It was therefore replaced in 1996 with a policy based on voluntary environmental management by companies and known as Product-Oriented Environmental Management, or POEM. POEM is based on the idea of certified voluntary Environmental Management Systems (EMS) operated by companies, extended to

include a particular focus on products.<sup>14</sup> The new IPP approach drew a positive response from the business associations, but initially it met with much scepticism from environmental organisations. From 1997 to 1999 more than 60 pilot projects received financial support in the Netherlands; the results were positive and this counteracted the initial scepticism. Hence a further period of promotion of five years was agreed to enable environmental aspects to be more strongly integrated in corporate decision-making.

Companies use POEM as a strategic instrument to draft future activities of environmental management. Two complementary policy instruments have proved to be success factors for POEM. On the one hand, stimulating conditions are needed, such as the expectation of governmental regulations or voluntary agreements of the industry. On the other hand, there is a great need for information on the environmental effects of products, and POEM has proved a driving force in establishing information systems in various sectors. An information system on the environmental effects of building prod-

<sup>14</sup> EMS are developed as part of the EU initiative 'Eco-Management and Audit Schemes' (EMAS) and with reference to the International Standard ISO 14.001. This also largely applies to POEM.

Table 2

### Important Product Groups and Sectors connected with Integrated Product Policy in Selected EU Countries and Regions (some realised, some under discussion)

Country/region	Product group/sector
Scandinavian countries (jointly)	Fishing, building, electronics, food, household appliances
Denmark	Textiles, electronic products, plastic products
Sweden	Vehicles, vehicle tyres, electronic and electrical equipment, packaging, printed products, furniture, foodstuffs, building materials
Finland	Paper and paper products
Netherlands	Chemical products, furs and leather, wood fibres, textiles, shoes, electronic products
Germany	Packaging, vehicles, electrical and electronic equipment, graphical paper, textiles, building sector
EU level	Packaging, vehicles, electrical and electronic equipment

Sources: Ernst & Young: Developing the Foundation for Integrated Product Policy in the EU, 2000; [http://europa.eu.int/comm/environment/ipp/ipp\\_devrep.pdf](http://europa.eu.int/comm/environment/ipp/ipp_devrep.pdf); additions by DIW Berlin

ucts and materials, for example, was set up, based on product life cycle analyses, and more than 100 companies acquired licences to use it.<sup>15</sup>

## Product Panels

The idea of the product panel was developed in Denmark in the fields of textiles, electronic products, goods transport systems and building. Examples of results are the development of a product declaration system and a waste management system for electronic products.

In a product panel companies, dealers, research organisations, consumer organisations and other interested parties work together to develop joint solutions to environmental problems caused by products. This form of cooperation is generally organised and directed by the participants themselves. If necessary they may receive financial or organisational support from the state.

An initiative similar to the panel was set up by the Danish Plastics Federation with the aim of improving the environmental effects of selected plastic products. The initiative was based on product life cycle analyses for six products. It proved difficult to involve trade

firms, purchasers (some of whom were industrial firms) and small firms, who could not see how they would benefit from participating. Finally, the effectiveness of the initiative was also seen to be limited in that there are no producers of plastics raw materials in Denmark. A possible approach would be to set up panels for the whole of the EU, but this would involve considerable organisation.

In Germany an attempt was made to set up a product panel for furniture, but ultimately it failed owing to a lack of motivation to cooperate among the participants. However, a product panel for automobiles was successfully established in Germany. It was based on a voluntary agreement between the Bavarian Government and industry, and it included activities for an Integrated Product Policy.

In Sweden there are two panels, for building and food, in which leading companies in these sectors are playing a major part. Here, too, the experience has been that additional incentives are needed to make the work a success. Among various proposals were differentiated tax rates to encourage environmentally friendly building methods and highly energy-efficient buildings, and a dialogue between the state and private firms on possible future regulations.<sup>16</sup>

<sup>15</sup> Dutch Ministry of Housing, Physical Planning and Environment (VROM): 'State and Next Phase of Integrated Product Policy in the Netherlands', in: *Ökologisches Wirtschaften*, no. 6, 2000, pp. 18-20.

<sup>16</sup> European Commission: 'Summary of Discussions at the 5th Integrated Product Policy Expert Workshop Product Panels', Brussels 2001.

## Product responsibility through obligatory take-back regulations

The principle of product responsibility towards the environment means that producers must bear the – mainly financial – responsibility for their products throughout the entire life cycle.<sup>17</sup> Without such a regulation, that responsibility generally ends when the products are purchased by consumers. As a rule it can be assumed that it is the consumers who pay for product disposal, for example. However, typically these 'price signals' do not enter their decisions on purchases. One reason for this is that the total costs of waste disposal cannot simply be related to individual products. A further factor in the case of products with long lifetimes, such as cars, is that several years elapse between purchase and scrapping, so that there is little incentive to consider the costs of disposal in purchasing decisions. Thus, in these cases there is also no incentive for the producers to reduce product waste and ensure that it is of environmentally compatible quality.

One means of ensuring that producers bear product responsibility is to make it obligatory for manufacturers to take products back from the consumer at the end of their life cycle. That need not actually involve the physical return of the product: the manufacturer need only agree to bear the costs of a take-back by a company that will scrap it or recycle it. This form of product responsibility is laid down in the German Closed Substance Cycle Waste Management and Waste Act of 1994, and it is being implemented through ordinances on waste from packaging, end-of-life vehicles and batteries; end-of-life electrical appliances are also to be included. There are also some voluntary agreements by companies, for example to take back end-of-life batteries, graphical paper, building rubble and end-of-life vehicles.<sup>18</sup> There are similar regulations to those in Germany in other EU countries, Sweden being one example. There is also EU framework legislation on product responsibility for end-of-life vehicles, product packaging and end-of-life batteries, and one is in preparation for end-of-life electrical equipment.<sup>19</sup>

<sup>17</sup> Guarantees for consumers from producers are one example of product responsibility, though they are not motivated by environment policy.

<sup>18</sup> For more information on the ordinances on packaging material of 1991 (amended in 1998), end-of-life vehicles of 1997 (amended in 2002), batteries of 1998, the planned ordinance on end-of-life electrical and electronic equipment and the voluntary undertakings see <http://www.bmu.de>.

<sup>19</sup> For more information on the directives on end-of-life vehicles of 2000, on packaging and packaging waste of 1994, on batteries containing harmful substances and accumulators of 1991 (amended in 1993 and 1998) and on the proposal for a directive on electrical and electronic equipment see <http://europa.eu.int/scadplus/leg/de/s15002.htm>.

The experience gained with the take-back regulations already in force has shown that owing to the heavy cost in terms of administration (one ordinance is needed for each type of product) obligations of this nature are only meaningful for a limited number of product types. Moreover, these products must be present in large numbers to justify the expense of the take-back system. As in many cases the manufacturers of products are not located in the consumer's country, it is also important to ensure that product responsibility is borne not only by the manufacturer but also by the importer, as is the case in Germany.

## Conclusion

Integrated Product Policy can be a valuable addition to the existing environmental policy approaches. A major advantage is that it tackles the whole spectrum of product-related environmental problems. But this also means that an enormous amount of information is needed, for instance, on the environmental effect of products throughout their life cycle. The amount of information required and the need to limit obligations to certain groups of products must be seen as disadvantages.

The opportunities for Integrated Product Policy lie in combining ecological and economic objectives. The concerns are to motivate companies and support them, as well as to develop market solutions that harmonise with environmental objectives. Another aim is to help EU companies to establish themselves on international markets with environmentally friendly product innovations. Whether that concept can meet the requirements of fundamental ecological structural change depends, among other things, on whether in the future considerations will be based on the functions of the product as well, or only on the products themselves. Rather, Integrated Product Policy is more easily reconcilable with an ecological modernisation strategy.

Seen as a whole, there are considerable differences both in the product-related policy strategies and in their implementation in the individual EU member states. The advantage of the Scandinavian and Dutch activities lies mainly in the cooperation, both between the state and the private sector and between individual companies. Instruments like POEM and product panels can link up resources and make cooperating companies more innovative.

The Green Paper on Integrated Product Policy proposes specific EU policy initiatives that are intended mainly to create the framework conditions for member states. That gives member states the scope to develop their own concepts. A European framework concept is

important because many products are not manufactured and traded nationally but elsewhere in the EU. It is regrettable that the EU White Paper has not yet been published. However, the experience gained with national concepts and instruments within the EU will advance Integrated Product Policy in Germany as well, on the conceptual level and in implementation. The great challenges we face are to develop effective 'instrument sets' and to achieve cooperation across departments and offices in ministries and the administration. It is also essential to flank the further development of this concept with more economic and ecological evaluation than hitherto.

Lydia Illge