COOPERATIVE APPROACHES TO INTEGRATED PRODUCT POLICY (IPP)

REFLECTIONS ON HOW TO STRUCTURE A PRODUCT FORUM
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Preface

Products are the basis of our prosperity and quality of life. They are, however, also responsible for negative environmental impacts resulting from their production, consumption and disposal. If we wish to implement a sustainable development which secures our prosperity and at the same time secures the integrity of the environment, we must intensify the production of goods that are environmentally sound throughout their entire life cycle.

For that we need cooperation among the various participants along the production line. The purpose here is not only an improvement in the exchange of ecologically relevant information within the chain. In many cases environmental improvements can only be achieved through close cooperation among the suppliers of raw materials, the manufacturers and the recyclers or the waste management enterprises.

Product Panels, an instrument developed within the overall strategy of the integrated product policy (IPP), are an excellent basis to accomplish these tasks. They also perform a bridge-building function between State and the market.

This brochure points out which questions arise during the establishment of a product panel and gives important organizational advice. With this brochure we would like to give impetus to both politics as well as trade and industry to make use of the manifold of opportunities provided by product panels and, at the same time, to contribute to the further development of the integrated product policy.

Stefan Mappus

Minister of the Environment and Transport in Baden-Württemberg
Member of the State Parliament
Introduction

Each and every phase in a product’s life cycle – development, marketing, distribution, utilization, and final disposal – is a challenge that must be answered if we are to achieve sustainable development

1) Sustainable development originally a forestry term. The sustainability concept first drew worldwide attention as a result of the Brundtlandt Commission in 1987. At the UN Conference on Environment and Development (UNCED) held in Rio de Janeiro, Brazil, in 1992, 178 states agreed to adopt the concept of sustainable development as a guiding political principle.

In the last few decades in Germany a wide variety of measures and initiatives have been adopted towards this end. These range from environmentally appropriate product development (“eco-design”), by way of communicative and educative measures (e.g. the “Blue Angel” eco-label), right through to initiatives in consumer advice (e.g. product tests by “Stiftung Warentest”). However, in the last five years or so, attention has turned to a new approach that might take us a step further. The concept of “Integrated Product Policy” (IPP) aims at establishing a stronger coherence between the various measures involved in product policy. The objective of IPP is to minimize the environmental problems a product causes throughout its life cycle.

IPP looks at both products and services and their ecological characteristics throughout their entire life cycle, from cradle to grave; IPP aims at improving the ecological behavior and impact of each of these characteristics and promotes product and service innovations that help achieve this objective (see Rubik 2002, page 148).

IPP, beyond this, also represents a change in the way we view the relationship between the state, the economy, and various social players. It means supporting the supply and demand sides of the market but with deliberate ecological intent. The objective is in the medium / long term to link up the structural opportunities we have today with the innovations of tomorrow and the production systems of the day-after-tomorrow. This call for action addresses not only “the” state or “the” economy but all players in any way involved.

This brochure looks therefore at the specific structures of cooperative approaches within the framework of IPP. Structures of this nature – referred to here as “product forum” – have in recent years, under a variety of different names, attracted attention across regional and national boundaries.

2) The term “IPP” in this brochure will have this extended meaning referring to both products and services. However, this brochure concentrates, for the sake of simplicity, primarily on products.

3) We might mention in this context the “Product bodies” (Bavaria) and “Pilot projects” (Baden-Württemberg), both in Germany, and the so-called “Product panels” in Denmark. For further details please refer to Chapter 5.
FOR WHOM IS THIS BROCHURE INTENDED?

This brochure is based on evaluations of a series of projects connected with IPP. The brochure is intended for all interested parties active in the following sectors:

- politics and government administration
- businesses and professional associations
- science and government consultants
- non-governmental organizations (NGO).

This brochure will, it is hoped, give all those who want to know more about the cooperative approach of IPP important information and advice with a view to concrete structuring and implementation. We see this brochure therefore as an offer of practical help.

THE CONTENTS OF THIS BROCHURE

This brochure places the emphasis on describing specific arrangements for setting up a product forum along these lines. It also includes an Appendix with useful supplementary information (addresses, Internet portals, etc.).

Chapter 1 first outlines the general situation that has led to product policy becoming increasingly significant in ecological terms and then provides an overview of the historical evolution of the IPP concept on a national and a European level.

Chapter 2 then introduces and explains the cooperative approach to IPP. Cooperation between the various players in the IPP context is seen as a response to the limited ability of the state and of the market to solve such problems alone.

Chapter 3 discusses the background aspects and the objectives in setting up a product forum.

Chapter 4 analyses the various criteria which might apply in selecting suitable products and product groups. It also provides a brief overview of various studies which might be useful in this context.

Chapter 5 discusses the really central questions. We examine in greater detail certain important aspects in organizing and conducting a product forum. The brochure looks separately at ways in which a product forum may be used (Section 5.2), various organizational aspects (Section 5.3), actual work in a product forum (Section 5.4), the implementation of results (Section 5.5), and follow-up monitoring (Section 5.6).

Chapter 6 draws up a list of “points to remember”, an important source of advice when it comes to planning and implementing a product forum.

The brochure is rounded off with Chapter 7, a list of relevant reference literature, Chapter 8, a glossary of terms, and Chapter 9, a list of useful Internet sources and the addresses of important institutions and organizations.

In this brochure we want to provide useful and important advice regarding work in a product forum; this brochure concentrates on such structures set up as part of state initiatives.
1 Integrated Product Policy – an overview

WHY FROM AN ECOLOGICAL POINT OF VIEW ARE PRODUCTS SO IMPORTANT?

Environmental policy, for whole decades, concentrated rather on solving environmental problems caused originally by the actual production processes. In recent years, however, a different perspective has been gaining attention, namely one that views product policy end-to-end. This change in perspective can be attributed to the following reasons:

- **Increasing proportion of environmental problems caused by products and by services:** Some environmental problems have been reduced - as a result of the change in economic structures and the success achieved by environmental policy on a more process-oriented basis. At the same time, however, the relative significance of environmental problems attributable to products and to services has grown. Their absolute environmental significance is also increasing - still today - as a result of the growth in private consumption.

- **Shift from site-specific emissions towards more extensive and diffuse sources:** With the UNCED conference at the very latest (Rio de Janeiro, 1992) there emerged an international awareness of the far-reaching indeed global character of environmental damage and destruction. The various successes in production-process-oriented environmental protection have attracted attention towards diffuse and smaller sources of emissions.

- **Products as globetrotters:** Parallel to the globalization of environmental problems there is also an increasingly powerful global integration of supply channels and relationships; very few product life cycles are limited to just a single country. This development is reflected above all in the dramatic advances in the globalization of trade flows in the 1990s.

- **Inclusion of the entire material life cycle:** The growing significance of products and services in taking environmental policy decisions can be shown most clearly by considering how a product’s life cycle can be broken down into individual phases and responsibility attributed to each. The role played by utilization and consumption, i.e. by what private households consume, has become much more important. A series of life-cycle assessment (LCA) studies underlines the predominance of environmental problems caused by the actual utilization of a product rather than by its manufacture particularly for products with a relatively long useful life.

- **Sources and sinks:** The links between economic development and environmental problems can be traced systematically along the life cycle of any product; attention is drawn here firstly to how its raw materials are extracted, i.e. the source, and secondly, through various transformation stages, to its final disposal, i.e. the sink. The connection between the source and sink of products and services represents a desirable result of economic processes.
• Environmentally relevant product differentiation strategies in saturated markets: The emergence of new products is accompanied by growing differentiation in terms of additional features; these become especially significant in saturated and stagnating markets. These extras expose the environment to yet more problems. A good example to illustrate this development is the myriad of technical extras on durables and appliances, which many consumers do not even use.

• Innovation and diffusion: New products continue to emerge from innovation processes; they try their luck and if the launch is successful they go on to penetrate the market. This in turn has the effect of displacing certain other products. This process results in a steady flow of opportunities and challenges for product design and development that can also be mobilized with deliberate ecological intent.

DEVELOPMENT OF IPP AT EUROPEAN LEVEL

The shift in environmental policy towards a product-oriented approach is not completely new. The European Union (EU) has in the past adopted a number of different measures aimed at environmental protection along product-oriented lines. The EU’s own eco-label is just one example. However, such advances were nearly always of a singular one-off nature. Meanwhile observers have realized that a new integrating and systematic approach is needed. This approach is now better known under the title “Integrated Product Policy” (IPP).

The term “Integrated Product Policy” (IPP) was first introduced in an accredited report (E&Y 1998) submitted on behalf of the European Commission’s Directorate-General (DG) for the Environment. This report triggered intensive discussion between various interest groups in society. At an informal meeting held by the EU environmental council in May 1999 IPP was defined as a central point of emphasis for its work in the future. The European Commission was subsequently requested by the environment ministers of member states to examine this concept in greater detail.

In February 2001 the DG for the Environment submitted a political discussion paper on the subject of IPP in the form of a “Green Paper” (European Commission 2001a). The objective of IPP was to reduce adverse environmental effects caused by products throughout their entire life cycle, with particular attention being paid to the possible use of market forces as a steering mechanism. Prerequisite for implementing IPP, according to the European Commission, was the improved ecological orientation of the market both on the supply side and on the demand side.

In June 2001 the EU environment ministers gave their support to the Green Paper and recommended the Commission to define an IPP concept with special implementation measures designed and prioritized so as to demonstrate the benefits of IPP. The EU Parliament in a hearing in October 2001 also discussed the Green Paper and in January 2002 submitted its own critical assessment.
IPP has also found its way into the 6th Environmental Action Programme (EAP). This program, due to last until 2010, takes up the subject of IPP at several instances. In its resolution on the EAP the European Council agreed on ways of extracting and using natural resources, namely “that the EU’s integrated product policy, designed to rationalize the consumption of resources and to minimize the adverse environmental effects of waste, should be implemented in conjunction with the national economies”. The subject of IPP is also taken up in the EU strategy for sustainable development.

In June 2003 the European Commission published an official Communication on the subject of IPP (European Commission 2003) in which its ideas, some new, some modified, on the subject of IPP were presented and in which IPP was brought into the context of sustainable development. The measures here proposed by the Commission are based on five basic principles:

- life-cycle thinking
- working with the market
- stakeholder involvement
- continuous improvements
- a variety of policy instruments.

Based on these five principles the European Commission proposes two sets of measures:

- “establishing the framework conditions for the continuous environmental improvement of all products throughout the production, use and disposal phases of their life-cycle;
- developing a focus on products with the greatest potential for environmental improvement” (European Commission 2003, 8).

### CONCENTRATION ON CERTAIN PRODUCTS

The Communication announces the following measures:

- conducting several voluntary pilot projects with a view to examining and demonstrating the benefits of IPP
- devising and applying a method for identifying and assigning priorities to products with the greatest potential for environmental improvement.

### TOOLS FOR CREATING THE RIGHT ECONOMIC AND LEGAL FRAMEWORK

The Communication proposes a series of measures laying down the general conditions:

- promotion of environmental taxes and of incentives getting the prices right
- drawing up the criteria for identifying environmentally negative subsidies
- checking the political and legal framework of environmental agreements
- legal regulations in the event of market imbalance or adverse effects on the European single market (e.g. waste and chemicals policies)
- drawing up a discussion paper on promoting the implementation of the IPP concept in businesses
- mobilization of the public procurement offices
- coordination and provision of an Internet platform for LCA data
- drawing up guidelines for treating products within the framework of the eco-management and audit scheme (EMAS)
- expanding the range of applications for the EU eco-label and the EU energy label.

### IPP IN GERMANY

The first measures for product-oriented environmental protection were introduced in Germany in the 1970s. Examples are the development of the “Blue Angel” eco-label or the ban on DDT. More recent initiatives in the 1990s included various draft regulations on
the return of used products, the Enquête Commission of the German Bundestag “Schutz des Menschen und der Umwelt” (Protection of people and of the environment), and studies on life-cycle assessment and substance chain management conducted by the German Federal Environmental Agency (UBA). Thanks to the variety of approaches and instruments certain “traditions” have already emerged; what is missing, however, is a conceptional framework and a systematic methodology.

One event of particular interest for the IPP discussion in Germany was the workshop “Perspektiven des produktbezogenen Umweltschutzes” (Perspectives for product-oriented environmental protection) held jointly by the Federal Ministry for the Environment (BMU) and the Federation of German Industry (BDI) on 01/February/2000. Common ground was found above all in evaluating the situation at that time. The following three key elements for a successful IPP were identified:

• integration
• cooperation
• communication.

Comparing the situation in European member states, Germany, thanks to its strong environmental “tradition” and the wide variety of instrumental approaches, counts among the pioneers of IPP. First attempts at creating a product forum (a cooperative approach involving various players interested in one product group with the objective of changing production and consumption patterns in ecological terms) came with the recent “Blue Angel” campaign initiated by the German Federal Environmental Agency. Also worthy of mention in this context are the many measures initiated by the Federal Environmental Agency aimed at promoting sustainable consumption.

A particularly important role in developing IPP in Germany has been played by the Bundesländer. They have set up a whole series of IPP initiatives. Baden-Württemberg, for example, has over recent years conducted a number of pilot projects in the paper sector (Frings et alia, 2002) and textiles sector (Keil/Rubik, 2004). Also worthy of mention in this context is Bavaria, which up to mid 2003 commissioned over twelve different IPP projects (inter alia in medical technology and in marketing concepts)7. Other Bundesländer, e.g. North Rhine-Westphalia, Thuringia, Lower Saxony, have also adopted similar measures.

7) For an overview of these projects please refer to the web site http://www.ipp-bayern.de.

![Figure 1: Starting points for IPP in the textile sector](image-url)
2 Cooperation between the state and the market

Markets are of course a useful means for organizing and structuring economic activities. The “invisible hand” (Adam Smith) leads to a process of “creative destruction” as Schumpeter described it. Markets react sensitively and always bring forth new solutions and innovations. Allocation processes take place according to the preferences of the players involved. However, markets also have their own problems, what the experts call “market failure”, e.g. inadequacies in providing public goods, in protecting the environment, in dealing with information deficits, and in preventing monopolies.

A central role in this context is often played by the state whose task is then to ensure that the markets function properly and to provide public services e.g. security, defence. Political activity in the past was usually seen as interventionist and hierarchic, i.e. a strong state setting out clear general conditions for society and for the markets. However, the state also faces a number of inherent problems, what the experts call “government failure”, e.g. information deficits, adaptation cost, bureaucracy, inefficiency.

The general shift in political perspective, emerging since the 1970s, is towards elements of social self-control. Klaus von Beyme, political scientist and professor at Heidelberg, described this development in 1991 as the transition from central state control towards a self-control aimed at cooperation with and between social players. And the increasing complexity in certain political fields reinforces this tendency.

The general developments here described in the state and in the market also influence IPP. In the political field of IPP we discern a structurally limited state failure. Four important reasons for this are:

- The regulatory strategy adopted in environmental policy of restricting isolated emissions from relatively large stationary sources has ended up, given the very quantity, the development dynamics, and the mutual interaction of emissions and substances, overtaxing the structures available for monitoring and enforcement.
- The allocation calculations and decisions of individual economic players, such is the nature of the system, cannot be predicted. The state cannot, either empirically or theoretically, create the necessary system know-how regarding micro-economic decisions and behavior.
- Even if we assume that there is no information deficit, another insurmountable hurdle takes its place. If all product-related information were transferred to the state, the authorities would face a flood of information, impossible to master and virtually impossible to structure in any meaningful environmental terms.
- This situation is further aggravated by the fact that not all businesses will be prepared to forward what is in many cases highly sensitive information to state institutions.
Politics in general and thus also IPP in particular are not able to properly assess the
devolved processes by which market players search for new solutions and innovations both
on the supply side and on the demand side. The role played by IPP is limited to utilizing
these innovation processes as a lever for supporting a change in structure in ecological
terms. IPP must look therefore to the players on the supply side and on the demand side
and support these.

IPP cannot swim against the market current - only with it. However, it must not rely on
the market alone. The market must be supported with reference to ecological objectives.
Neither the market nor the state alone are capable of this. Only common effort in this
direction will lead to success.

Taking this as our point of departure, what we need, it will be seen, is cooperation be-
tween players. But what does such cooperation mean? In the specialist literature there
are a number of definitions 8. The basic characteristics of such cooperation are:
• voluntary working together
• legally independent partners
• fundamental independence
• aligned objectives
• limited duration.

 Constituent features of such cooperation are autonomy and interdependence (Rotering
1993, page 7). Cooperative approaches are, especially in the economy, a means to sup-
plement market and hierarchic forms of coordination (e.g. fixed corporate cooperation)
with forms that are more flexible. However, they cannot and should not be a substitute
for competition.

Cooperation in the IPP context can be seen as a response to the limited ability of the
state and of the market to solve such problems alone. Cooperation in the IPP context
should be seen as an opportunity to play an active part in structuring future develop-
ments. Cooperation in a subject field or a product group creates new approaches and
brings players together.

This brochure refers to cooperation for IPP purposes as a product forum.

8) For an overview, please refer to
3  The objectives of a product forum

A product forum performs a bridge-building function between the state and the market. It reflects the cooperative nature of IPP and is based on interaction between the participating players. It is based on two social mechanisms, namely learning and negotiating.

LEARNING

The meeting of parties participating in a product forum opens up the possibility of setting social, interactive processes between the players in motion. This meeting may allow learning processes, generate new knowledge and understanding, and reveal new ways to find common approaches and solutions. It is also conceivable that critical discourse might help players to at least curb the habit of self-reference often encountered in such meetings.

The background assumption must be that different participants will view problems and assess possible solutions differently. The process of dialog may generate new insight, awareness, and possibly even attempts at a solution. These steps will be based on an understanding of one another’s positions and problems. Businesses and social players may gain insight into the priorities and measures of environmental policy while in the reverse direction the representatives of state institutions may learn more about the workings of measures of environmental relevance adopted in the economy. There are, however, certain “rules of the game” that all participants must accept. Section 5.4.1 examines this aspect in greater detail.

NEGOTIATING

The complexity of the ecological challenges all along the material and economic life cycle of a product demands close cooperation and a sharing of tasks and responsibilities between the various players. Each of these players usually has specific capacities and tools for solving particular problems.

A product forum is organized not only for the sake of mutual acquaintance and understanding. It serves the purpose above all of developing contributions to finding solutions for existing problems. It should encourage negotiations and transactions involving concessions and commitments, i.e. to a balancing of the interests and objectives of the participating parties.

Within the framework of such negotiation it will often be a matter of applying general objectives, e.g. that of sustainability, to the product group treated in the product forum and then agreeing on the priorities that this step makes necessary.

A product forum should fill out the cooperative approach and support an ecologically balanced alignment of production and consumption patterns. All in all the product forum concept could make a meaningful contribution to “Agenda 21” approved at the conference in Rio de Janeiro (1992) and help meet the obligations of the Johannesburg summit (2002).
Choosing a product group for a product forum

How should we select a product group suitable for treatment in a product forum? Are all products equally suitable? The choice of suitable product groups must not be made from the ecological perspective alone. The following criteria should be considered for selecting and demarcating products:

**Ecological relevance**
- quantity,
- toxicity,
- ecological relief potential;

**Economic relevance**
- domestic production,
- domestic value added;

**Social relevance**
- number of staff,
- observance of the basic rights of the International Labor Organization (ILO);

**IPP-relevance**
- mix of instruments,
- innovative character,
- instructive value;

**Political relevance**
- access to players,
- emotional symbolic content,
- available experience,
- political climate;

**Transfer potential and suitability for transfer to other sectors.**

Other criteria are certainly conceivable. However, the list compiled here should at least facilitate selection. What is important is to consider the product’s entire material life cycle end-to-end and not merely a restricted excerpt. However, the structuring and empirical corroboration of the catalog of criteria are extremely complex and must always keep pragmatic considerations in mind in order to limit the cost and effort needed to acquire data.

Various experience in setting priorities for selecting suitable product groups has been gathered in recent years in Germany and elsewhere in Europe:

- A study conducted in 1995 in Denmark (Hansen 2003) classified product groups according to the indicators – energy consumption and loss of resources along the product’s life cycle.
- The Swedish Environmental Protection Agency, considered by many the leading country in IPP, has been commissioned to conduct a number of studies (SWEPA 2002a, 2002b, Carlsson et alia 2002). These studies set priorities according to indicators such as the consumption of fuel and electrical power, the associated emissions of CO2, NOx, and SO2, and the use of chemical substances classified as having carcinogenic, mutagenic, toxic, or sensitizing properties. The Environmental Protection Agency, based on electrical current consumption and the listed emissions, has given priority to the following product groups: petroleum products (including the manufacture and processing of fossil and fertile materials), electricity/gas/steam and hot water, buildings, trade (wholesale and retail, including preventive maintenance and repair for motor vehicles and utility appliances), food and beverages, and real estate activities.

- In Belgium too a number of product groups have been analyzed (Institut Walloon / VITO 2002). Here the intensity of resources utilization (materials, energy, 9

9 A Belgian study (Institut Walloon / VITO 2002) distinguishes between five levels: function classes, function groups, product categories, end products, and consumable materials / spare parts.

The Statistisches Bundesamt (German statistics office) has drawn up a quality table for production statistics (issued 2002) (Statistisches Bundesamt 2001) in which it divides up quality groups using an outline based on the decimal system. This outline is broken down into 30 two-digit quality divisions, 116 three-digit quality groups, 206 four-digit quality classes, 564 five-digit quality categories, 1204 seven-digit quality sub-categories, and 6147 nine-digit quality types.

10 Product groups are classified and demarcated according to the NACE classification proposed by eurostat (Statistical Office of the European Communities) (NACE Rev 1 “Nomenclature statistique des activités économiques dans la Communauté Européenne” - CA-80-93-436-EN-C).
water) was taken as the first decisive criterion. Following this initial selection step, for those product groups with the most intensive resources utilization, data was compiled for central input and output flows (raw materials consumption, waste flows, and air and water emissions). Result: Construction and accommodation, transport, packaging, electrical applications (e.g. refrigeration and air-conditioning plant), and office equipment (e.g. computers, photocopiers) proved to be the most important consumers and thus suitable subjects for IPP.

Comparable studies referring to industries in Germany or Europe-wide are not yet available. A series of investigations in Germany has, however, looked at certain domestic fields and attempted to set priorities for those where IPP might prove useful:

- A joint study by BUND/Misereor (1996) identified seven priority areas. These were accommodation, food, clothing, health, education, leisure, and social activities.
- A study of basic material human needs conducted by the German Federal Environmental Agency (UBA 1997) identified four such fields (food, clothing, accommodation, mobility). In a continuation of this study (UBA 2002) the areas tourism, industry, and natural resources were added to the list. Priorities are set for these fields but without referring explicitly to any key indicators.
- In Germany the Öko-Institut, in Freiburg, has identified the ten most important product groups from the environmental point of view on the basis of life-cycle assessments (Grießhammer / Möller 1999). The objective here was to include not only consumption but above all the effects of product manufacture. The Öko-Institut study revealed that in Germany about two thirds of resources consumption and of environmental degradation can be attributed firstly to accommodation, mobility, food and drink, and information and communications equipment, secondly to large domestic appliances, e.g. refrigerators, freezers, ovens, TVs, video recorders, washing machines, dryers, and dish-washers, and thirdly to textiles.

Certain problem areas which can be derived from these studies are:

- how to assess the full material life cycle, in particular the phase of product utilization
- how to demarcate between prefabricated materials and the finished product (i.e. goods for final consumption)
- how to apportion prefabricated materials and components to the finished products
- how to include imports and exports in such data, i.e. environmental effects occurring abroad
- how to divide up, assign, and summarize product groups
- how to select ecological criteria using key indicators and how to separate this from the complexity of life-cycle assessment (LCA)
- the availability of data
- a range of data uncertainties
- the time frame under consideration
- the geographical area which is represented and investigated in a product forum.
5 The structure of a product forum

5.1 Introduction

Both in Germany and abroad experience has already been gained in implementing product fora. Here we briefly sketch this experience. Although the nomenclature differs in places, the idea of a cooperative approach is largely the same. Experience with product fora is available in a considerable volume especially if we include similar cooperative approaches.11

- **Denmark**: The blueprint for product fora comes originally from Denmark, where ever since 1998 “product panels” have been operating in the following sectors: textiles, goods transportation, electronics, building and construction, food and drink.

- **Netherlands**: In the Netherlands there are three projects concentrating on the following product groups: clothing, food (meat substitutes, fish, biological products), and home furnishing (furniture, lighting).

- **Norway**: One pilot project was initiated in 1999 for paints and coatings; two more projects have since been launched, for textiles as well as building and accommodation.

- **Sweden**: An “Environmental advisory council” has been set up on the initiative of the Swedish ministry of the environment. This council in turn initiated discussion for “Building and managing properties” and “Future convenience goods trade”, both of which are comparable to a product forum.

- **Germany, Baden-Württemberg**: The Ministry for the environment and transport in the German Bundesland of Baden-Württemberg set up one pilot project in 2001-2002 for paper (Frings et alia 2002) and another in 2002-2003 for textiles (Rubik/Keil 2003). The second of these projects provided the framework for this brochure.

- **Germany, Lower Saxony**: Between 1999 and 2002, within the framework of a commission set up by the government of the Bundesland of Lower Saxony, a working group looked at the question of product responsibility and, taking the example “vehicle tires”, analysed the possibilities of IPP.

- **Germany, Bavaria**: Two so-called “product bodies” were set up in summer 2002 on the initiative of the Bavarian ministry of the environment. These product bodies, taking the examples “kitchen” and “sports footwear”, are to examine the possibilities of cooperation between players along the life cycle of such product groups.

- **Germany, Bavaria, Nuremberg**: The city of Nuremberg, in conjunction with various businesses and institutions, has compiled a guideline for managing ecological product development; this initiative is entitled COUP 21 (Cooperation Umweltamt - Pionierunternehmen im 21. Jahrhundert).

- **European Union**: The European Commission is planning to launch two pilot projects at the beginning of 2004 based on the product forum idea. The Commission has drawn up a working paper describing key elements and concepts so far identified.

11) Systematic investigations relating to product fora are only available for Denmark (Oxford Research 2001). The European Commission has also discussed this subject, in a workshop, dated 14 June 2001 (European Commission 2001b).

**EXAMPLES OF SIMILAR COOPERATIVE APPROACHES**

There are many different cooperative approaches both in environmental policy and in other political areas. Certain examples are of particular interest for work in a product forum:

- projects in “transition management” conducted by a number of government ministries in the Netherlands
- political dialog in Germany on the subject of chemicals in the 1980s and 1990s
- “Forum on washing for the future”, a dialog conducted by the Industrieverband Körperpflege- und Waschmittel eV (IKW) (German Cosmetic, toiletry, perfumery, and detergent association)
- jury responsible for awarding the “Blue Angel”, Germany’s eco-label
- standardization bodies of the Deutsches Institut für Normung eV (DIN) (German Institute for Standardization)
- environmental dialog, Baden-Württemberg, Germany
- various research and development studies
- various substance chain management projects
- cooperative LCA studies (e.g. packaging studies conducted by the German Federal Environmental Agency)
- platforms of the Environmental Technology Action Plan (ETAP).
REASONS FOR CREATING A PRODUCT FORUM

A product forum can be set up for a wide variety of reasons. The following reasons are conceivable:

• **Specific problems relating to a particular product group:** A problem specific to one product group may arise from the point of view of an industrial association, which then wishes through the product forum to take strategic soundings for medium and long term development possibilities. Such a problem may also arise from the point of view of an environmental authority, which wishes to solve a significant environmental problem in cooperation with the players affected by this without actually resorting to legislation.

• **Initiatives for legislation:** Legislative measures proposed by the state or simply discussions about such initiatives can also lead to the creation of a product forum.

• **Individual initiatives:** It is also conceivable that a single organization might seize the initiative to found a product forum, e.g. a business, trading company, or environmental organization, too.

DIFFERENT TYPES OF PRODUCT FORUM

A product forum may be set up for a wide variety of motives. The specific form that such a product forum assumes will differ accordingly. Our international comparison has already shown this quite clearly:

• **Focussing on one life-cycle stage:** This type of product forum concentrates on only one stage in the life cycle of a product. Such a forum is by nature aligned horizontally. In the foreground is the wish to improve certain ecological aspects connected with this particular stage in the product’s life cycle. A product forum of this type might involve in particular professional associations and cooperative groups within the relevant sector of industry.

• **Focussing on the whole life cycle:** This type of product forum, unlike the stage-oriented type, concentrates on the product’s whole life cycle and its structure and is thus aligned vertically. A product forum of this type will require in particular cooperation between various businesses involved along the life cycle of the product under consideration.

• **Subject-oriented:** This is a complementary type of product forum dedicated to one special subject or problem e.g. energy saving.

Approaches to structuring a product forum are also very different:

• **Content alignment:** Particular subjects are fixed in advance or emerge in the course of forum work.

• **Initiators:** A product forum may be initiated by a person who or an institution which has recognized one or more ecological problems and wishes to work on ways to minimize the effects (businesses, associations, trade, disposal companies, etc.).

• **Spatial alignment:** A product forum may be set up on any one of a variety of levels, e.g. global, European, national, or regional; however, the wider the alignment, the greater the organizational effort needed.
In this brochure we want to provide useful and important advice regarding work in a product forum; this brochure concentrates on such structures set up as part of state initiatives. If some other type of product forum is planned, it is possible that not all of the following points apply. We still recommend nonetheless that the following advice be observed for procedure within the product forum!

Figure 2 illustrates our subsequent procedure and important aspects once again in graphical form.

![Figure 2: Possible sequence and key elements of a product forum](image-url)
5.2 Using a product forum

A product forum can be initiated by any of a number of players. However, a product forum, irrespective of who initiated it, can always help to build bridges between the state and the market. Its approach cannot in any way replace politics and environmental policy but it is tied to considerations which are described in the following sections of this brochure. The use of a product forum is not to be recommended for product groups whose life cycle is not clearly recognizable at least in outline.

Previous experience shows that in many instances the role played by the initiating institution in the actual process of a product forum is especially critical. The initiator should preferably assume the role of observer involved in the forum process without attempting to define its course. However, at the same time, it is also important to heed the serious character of a product forum and ensure that all important elements of its work are communicated to its initiators.

5.3 Clarifying the organizational aspects

Before the actual work of a product forum begins, there is a series of organizational aspects that should first be clarified. The importance of organizational structuring at this phase should not be underestimated; this does after all fundamentally influence the content, the distribution and assignment of roles, and the forum’s working ability. There will probably be some sort of interaction between the players and various forms of cooperation: In one direction the behavior of the players lends structure to their cooperation and in turn the structure of their cooperation influences how the players behave.

Which organizational aspects should to be clarified in this early phase?
- Who is to assume leadership of a forum?
- Are secretarial services required?
- What should be the composition of the product forum?
- Which role is played by public institutions?
- Which costs are incurred by the product forum and who is to pay these?

LEADING A PRODUCT FORUM

An independent person should be charged with leading the product forum in order to preclude possible conflicts of interest and loyalty. The role of chairperson (who should be paid for this activity) will ideally comprise the following tasks:
- convening and chairing meetings
- motivating and “inspiring” participants in the course of discussions
- result-oriented, dynamic support of the forum’s development
• moderating, listening, mediating in the event of conflict or dissent
• representing the product forum.

The chairperson should be accepted by and enjoy the support of all members of the product forum. The chairperson can only properly perform his / her functions by structuring forum processes in a fair and neutral way; the chair’s impartiality is an indispensable prerequisite in ensuring that the forum works constructively. Inspiring, mobilizing, indeed visionary abilities are also desirable characteristics in a chairperson, motivating members of the forum to concentrate on the forum’s objectives 12.

SECRETARIAL SERVICES

We recommend appointing a secretary to support the chairperson. This is necessary to ensure that the chairperson can properly perform his / her functions. The secretary may - but must not - belong to the same organization as the chairperson. The secretary is to perform the following functions:
• providing technical and organizational support for the chairperson (e.g. keeping minutes, material research, compiling documentation)
• ensuring the smooth transfer of information (e.g. meetings, follow-up activities)
• giving the chairperson specialist technical support for the various content.

COMPOSITION OF A PRODUCT FORUM

A product forum is based, as already implied, on a cooperative approach to structuring a subject or product field. This means that its composition must be essentially pluralistic, incorporating as many different interests, objectives, and attitudes as possible.

Ideally a product forum should be kept to a manageable size. Danish product panels work with around 15 members; the “golden rule” for the standardization committees of the German Institute for Standardization is a maximum of 21 persons per group 13.

Forum participants should be selected jointly by the chairperson and the institution that has initiated the product forum.

When selecting the members for a product forum the following aspects should be considered:
• The members of the forum should represent the material life-cycle phases of a product; this will of course require advance analysis of the product group in question. Generally speaking, members can be assigned to the groups listed in the adjacent box.
• Players should have gained a measure of relevant experience in confronting ecological challenges, possess a sufficient general knowledge base in the subject area, and bring personal commitment.

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12) Schneidewind (2003, 27) sees the chairperson (in the context of material flow management) as interpreter and bridge-builder who should therefore possess high communicative competence and be able to “interpret” organizational relationships. Schneidewind equates these requirements with the special talents needed by a “Jazz band leader”.

13) The German Institute for Standardization (DIN) has even laid down this figure in its DIN 820 standard.
• Political institutions (ministries, public administrations) should not be over-represented.
• The members should be creative and committed and actually want to actively participate and contribute. If this is for some reason, e.g. time or capacity, no longer possible, the member should voluntarily withdraw from the product forum. The forum should discuss the question of membership regularly (no later than when plans of action are revised) in order to retain a certain dynamism and avoid becoming a “closed shop”.
• Another point that should be given sufficient consideration is the spatial dimension; this will depend on the geographical alignment of a product forum.

These aspects are important conditions for putting together a product forum successfully. However, a product forum will only really come to life when it gets down to work and routine cooperation. The “chemistry” amongst members of the product forum must be “right”: What is important is an atmosphere of mutual trust and respect and a sound basis for cooperation.

Not undisputed, however, as regards the composition of a product forum are the following aspects:

• **Association model versus agents for change model:** A product forum may concentrate on the one hand on incorporating associations; these of course represent the interests of members involved along the product’s material life cycle. Or, on the other hand, it may concentrate more on businesses with a pioneer character and pushing for market transformation. Each of these two models has specific advantages and disadvantages which will have to be weighed per case.

• **Big players versus implementers:** The participants in a product forum get involved in its work in different ways depending on their respective interests and experience and assume responsibility to different degrees. Does it make more sense to win over important decision-makers of the business world for the forum or rather persuade those persons to join who might be expected to support and actually implement the results of the product forum in their respective organizations? The big decision-making players of course bring much greater weight to bear on the market but at the same time they demand from others a greater readiness to compromise. Agreement may be reached but it represents only the lowest common denominator among forum members.

• **Representatives versus individuals:** Each member of a product forum may see his / her role in a very different light. Do participants represent primarily their respective organizations or are they able – at least partly – to detach themselves from this role? Is there a risk of conflict between these two roles?
- **Free-thinkers versus representatives:** The experience made in Sweden is that incorporating “free-thinkers” (e.g. artists) may bring new, surprising impetus to such groups.\(^{15}\)

Although our state of knowledge today does not give us unequivocal answers to these questions, still the questions themselves should not be overlooked. All in all the participants in a product forum must be able to expect some sort of added value. Advantages may be of an operative or of a strategic nature:

Possible operative advantages from participating in a product forum include:
- improving one’s earnings situation by saving costs or by increasing turnover
- expanding cooperation with suppliers and buyers
- forming closed and continuous material cycles
- strengthening customer communications.

Possible strategic advantages from participating in a product forum include:
- opening up new fields of business and exploiting new market segments
- learning by extending one’s knowledge base
- strengthening of customer ties and loyalties
- establishing contact and interaction with competitors and social players
- creating new networks and opportunities for cooperation
- gaining insight into, discussing, and (possibly) even actively participating in the planning of political measures
- identifying possible strategic challenges in the medium and long term (“early warning system”)
- recognizing innovation potentials
- recognizing already existing risks and problems.

Incentives for participation might take the form of the above operative and strategic advantages. Various economic incentives, e.g. project promotion, are also conceivable, leading to participation or to self commitments on the part of a particular sector.

**FINANCING A PRODUCT FORUM**

The work of a product forum incurs a variety of costs:
- **Chair:** The chairperson of a product forum, to properly perform his / her work, requires a certain budget covering e.g. various personnel and material costs. Since the chairperson is a key player in a product forum, this function should be allocated an appropriate budget.\(^{16}\)
- **Secretarial services:** The chairperson cannot conduct the product forum alone; he / she needs the assistance of a secretary to help with technical matters, organization, and subject content. These costs must be calculated and included in the overall financ-

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15) This phenomenon has been noted by Siv Näslund, who used to head the Swedish environmental advisory board.

16) The chairperson’s tasks are described earlier in this Section.
5 THE STRUCTURE OF A PRODUCT FORUM

ing of a product forum.

• Participation costs: The costs incurred by participation in a product forum are usually carried by the forum’s members themselves. However, participation by non-government organizations should be appropriately remunerated in order to ensure that these organizations are always in a position to contribute their competence.

• Implementation costs: The costs incurred in implementing measures agreed by a product forum are usually carried by the forum’s members themselves. However, as experience from Denmark shows, it may be advisable to accord forum members at least the possibility of applying for third-party funding for various jointly agreed actions 17.

When deciding how a product forum should be conducted these various types of costs should be duly considered and accorded an appropriate budget.

ROLE PLAYED BY PUBLIC INSTITUTIONS

The role played by public institutions is generally considered an especially critical and sensitive area. The staff of a state institution participating in a product forum must be accorded the same status as its other participants.

A desirable function of such participants is the attempt to build some sort of bridge between policy and political practice. Their tasks include:

• keeping the forum informed regarding relevant government initiatives that are pending, planned, or in discussion

• supporting the work of the product forum e.g. by providing technical assistance on various questions, items of information, etc.

• communicating the working results of the product forum to government authorities.

Forum participants coming from state institutions should interpret their role in a fairly neutral way in order to avoid exerting a biased influence on the forum process.

There is also a certain problem of consistency when it comes to the representatives of public concerns. Representatives of public institutions involved in the work of a product forum may not necessarily all speak with a single voice; inside the forum they may come up against the logic of different institutions. This situation is not altogether unusual and may prove to be a problem in the product forum’s work.

17) Such funding is awarded by the “Danish council for cleaner products”. This body includes representatives from business, NGOs, government ministries, and trade unions. The “Danish council for cleaner products” deals with ecological questions - not only with respect to individual product groups but also in a superordinate sense. Generally this means a stronger political alignment. The Council advises the Danish environment authorities and, as part of its “Program for cleaner products” decides on how to allocate financial awards to the various “product panels”.

5.3 CLARIFYING THE ORGANIZATIONAL ASPECTS
5.4 The work of a product forum

The work of a product forum is primarily based on content. However, this concentration on content still needs certain “rules” to make sure that all the members of a product forum deal constructively with one another. Section 5.4.1 describes these procedural rules in greater detail. Section 5.4.2 then looks at the way in which the product forum treats its chosen content.

5.4.1 PROCEDURAL ASPECTS

When the product forum starts work it is important to clarify how exactly the forum’s members are to deal with one another. This means stipulating at an early stage the circumstances in which the forum’s participants come into contact with one another. We should distinguish here between two aspects: Which rules are to be applied to the entire duration of the product forum’s work and which general conditions (“signaling”) are to be observed when launching a product forum?

RULES OF THE GAME

A product forum is based on a series of interactive processes. These processes rely on mutual acceptance and the desire to deal fairly with one another. This is really the only way to ensure a suitable climate for discussing and working together. For this purpose, before even beginning the actual work of the forum, certain “rules” should be laid down as conditions for entering into discussion. These rules should be drawn up anew for each product forum and should be presented for discussion and approved at the forum’s very first meeting.

These rules should observe the following key elements:

- The chairperson is responsible for convening the meeting, for recording the minutes, and for conducting debates.
- The work of the product forum should be directed towards establishing consensus between participating members, so that voting will usually be unnecessary.
- Participation is voluntary. No sanctions are envisaged.
- A product forum should devise its own working sequences, schedules, and implementation plans.
- A product forum should aim to draw up progress reports at periodic intervals.
- Discussions should be open and transparent. Discussions, unless agreed otherwise, should be confidential. The forum should itself decide what type of information is to be disclosed and when public announcements are to be issued.
- A product forum may set up working groups to familiarize the forum with special themes or problems.
- All members of a product forum enjoy equal status.
- Each member of a product forum should have fair and equal access to information and know-how.
- The channels for coordination and communication with political bodies and government authorities should be agreed from the outset.

Care should be taken, however, to ensure that the pendulum does not swing too far in the opposite direction and that forum organization is not too heavily formalized: That might jeopardize the creativity of forum members.
ESTABLISHING AN APPROPRIATE SETTING FOR INAUGURATING A PRODUCT FORUM

Members of a product forum should be appointed and convened in an appropriate manner. If the initiator is a government ministry, it might be considered appropriate to have members notified of their appointment by some ministerial personality in order to win over new forum members.

The inaugural session of a product forum might be organized along similar lines. To underscore the significance of a product forum for the political world, its inaugural session might e.g. be opened by the Minister him / herself.

5.4.2 THEMES TREATED BY A PRODUCT FORUM

Work in a product forum is of course closely linked with the product group for which the forum has been set up.

A product forum should focus on a certain product group. A wide variety of possible themes are conceivable:

- What are the environmental and sustainability objectives? Can these objectives be suitably transferred to the product group in question? Are there any further objectives?
- What are the ecological problems, challenges, and deficits along the product’s material life cycle? Can these be assigned priorities?
- What is the situation regarding data and information sources? Are there any gaps and / or uncertainties in the available data, and, if so, where?
- Who are the important players, interest groups, and businesses situated along the product’s life cycle?
- To what extent do the supply and outlet relationships operate on a globalized basis?
- Can any dynamic innovations be expected in the medium to long term?
- Are there any particular problems specific to this product group?
- Which measures have been adopted so far on the supply side and on the demand side? What experience has been gained by individual players so far in this respect?
- What has so far been undertaken by the main players in politics, government, and society?
- What possibilities are there for exerting influence and shaping policy? Where will the forum come up against its boundaries?
- What action can players in the forum take and what inevitabilities do they face?
- What visions and long-term ecological and sustainability objectives are conceivable?

To this list of possible themes we must add three further aspects which should really stand at the very beginning of every forum’s work:
• clarification of objectives for the product forum’s work
• agreement on procedural rules
• benchmarks for evaluating the success of the product forum’s activities.

An excessive multiplicity of themes is unwise; this may overload the forum’s work. The temptation to look at all themes, problems, and challenges all at one time should be resisted. It is advisable to set definite priorities and points of focus. A realistic view is most certainly necessary; this avoids subsequent disappointment and increases the forum’s chances of success.

We recommend therefore that each product forum clarify the following central aspects. The idea behind this recommendation is that the forum should act as a sort of management process bringing its various tasks together into an action plan lasting over several years. The following points should be clearly stipulated:
• the players and their respective areas of responsibility
• priorities and measures
• proposed activities
• instruments

An action plan of this nature can of course be revised and modified as and when necessary. The goal, however, must be to see it as a sort of “road map” for the product forum’s activities. An example for an action plan along these lines can be found in Table 1.

**Table 1: Action plan – an example Action plan of the Danish product panel on electronics (Oxford Research 2001, 20)**
Reports should be drawn up at regular intervals on the performance and development of forum work. Progress reports might be advisable, compiled e.g. once per year and also made accessible to external parties. Evaluation of progress within the forum by the members themselves is in this context an important process-related task which might lead, in a sort of internal feedback, to rethinking and possibly adjusting the action plan.

**TECHNIQUES AND TOOLS**

Forum work can be supported by a wide variety of different creativity techniques and instruments.

Examples for such creativity techniques include the following \(^{18}\):

- brainstorming
- brainwriting
- negative brainwriting
- heuristic empirical principle
- components analysis
- mind mapping
- morphological boxes
- pin-board
- progressive abstraction
- six hats
- teams.

Examples for tools include the following \(^{19}\):

- analysis of players
- backcasting
- check-lists
- life-cycle assessment
- planning cells
- portfolio analysis
- quality profiles
- scenarios
- value analysis.

Use of these methods may:

- support the forum process
- raise the quality of interaction between forum participants
- identify new possibilities or ideas
- throw new light on the forum’s chosen subject by viewing it in a longer time frame.

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\(^{19}\) Compare Tischner et al (2000) for an exhaustive analysis.
5.5 Implementing the forum results

The results attained in the product forum should be focussed, as proposed in the last section, into an action plan and published in a manner agreed by the forum. Focussing the forum’s results in this way stirs the various players participating in the forum into action; they should then, according to their respective capabilities, develop appropriate activities.

The implementation of the forum’s results as agreed by its members should be documented in order to provide feedback for the forum’s work and to support the task of revising the action plans.

5.6 Monitoring

The product forum concept forms part of a modified control philosophy; its point of departure, as explained in Chapter 2, is a changed political understanding and recognition of the structural limitations of product-oriented, regulative environmental policy. This is accompanied by hope that the product forum concept can produce results that will contribute to transforming the market along more ecological lines.

It is important therefore to observe and monitor the forum’s activities and implementation measures. Monitoring is advisable at regular intervals in order to:

• support the work of the product forum,
• provide information for members participating in the forum who can then, thanks to this form of organized feedback, align their respective activities accordingly
• identify areas of potential improvement.

It should be possible in this way to broadcast “success stories” to a relatively wide public audience. This is the way, the only way, to draw public attention to the work of the product forum.
6 Points to remember

The table below summarizes aspects previously described in this brochure.

<table>
<thead>
<tr>
<th>GENERAL RECOMMENDATIONS</th>
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<tbody>
<tr>
<td>• Use of the product forum within the framework of IPP</td>
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<tr>
<td>• Taking account of experience gained in Germany and abroad with the product forum concept and similar co-operative approaches</td>
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<tr>
<th>FUNCTIONS</th>
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<tr>
<td>• Contribution to sustainable development according to the commitments of Rio and Johannesburg</td>
</tr>
<tr>
<td>• Social interaction opens up learning processes</td>
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<tr>
<td>• Contributions to finding solutions for existing problems through negotiation</td>
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<tr>
<td>• Building bridges between state authorities and the market</td>
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<tr>
<th>SELECTING SUITABLE PRODUCT GROUPS</th>
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<tr>
<td>• Demarcating and classifying product groups</td>
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<tr>
<td>• Defining the appropriate criteria</td>
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<tr>
<td>• Taking account of experience gained in Germany and abroad with selecting suitable product groups</td>
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<tr>
<td>• Pragmatic solutions</td>
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<tr>
<th>THE STRUCTURE OF A PRODUCT FORUM</th>
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<tr>
<td>• Considering the motives and reasons for a product forum and selecting an appropriate forum type</td>
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<td>• Laying down the regional / geographical terms</td>
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<tr>
<th>CHAIR AND SECRETARIAL SERVICE</th>
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<tr>
<td>• Keeping the chair and the secretarial functions separate</td>
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<tr>
<td>• Remuneration for the chairperson</td>
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<tr>
<td>• Assuring the neutrality of the secretary</td>
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<tr>
<th>COMPOSITION</th>
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<tbody>
<tr>
<td>• Basis - viewing the product’s whole life cycle</td>
</tr>
<tr>
<td>• Prerequisite for selecting forum members - an analysis of the product group</td>
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<tr>
<td>• Members should represent pluralistic interests and approaches</td>
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<tr>
<th>FINANCING</th>
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<tr>
<td>• Budget for chairperson, secretarial services, and involvement of NGOs</td>
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<tr>
<td>• Other members of the product forum should not be paid.</td>
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<tr>
<th>ROLE OF GOVERNMENT AUTHORITIES</th>
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<tr>
<td>• Government authorities should not be over-represented.</td>
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<tr>
<td>• Government authorities should act as “bridges” and “advisers” in the product forum.</td>
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<tr>
<th>RULES OF THE GAME</th>
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<tr>
<td>• Principle of consensus</td>
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<td>• Participation should be voluntary; no sanctions</td>
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<tr>
<td>• An action plan should be drawn up; progress reports should be compiled at periodic intervals.</td>
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<tr>
<td>• Mutual acceptance and fairness</td>
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<tr>
<td>• Working groups may be used to provide a basis for detailed discussion of clearly defined technical subjects or projects.</td>
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<tr>
<th>SUBJECTS AND TECHNIQUES</th>
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<tr>
<td>• Setting priorities and points of emphasis for subjects</td>
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<td>• Using appropriate techniques and tools to support the forum’s work</td>
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<tr>
<th>IMPLEMENTATION</th>
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<tr>
<td>• Implementation of the action plan by the forum’s members</td>
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<th>MONITORING</th>
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<tr>
<td>• Organizing (periodic) monitoring</td>
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<tr>
<td>• Feedback loop to forum members and other interested circles</td>
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<tr>
<td>• Communicating examples of success to interested circles</td>
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Table 2: Summary of points to remember for a product forum
7 Literature - recommended reading

LITERATURE ON THE SUBJECT OF IPP


LITERATURE ON THE SUBJECT OF THE PRODUCT FORUM CONCEPT


SPECIAL LITERATURE RE CHAPTERS 3 TO 7


Hansen, Erik (2003): Ranking of industrial products. Copenhagen: Danish Environmental Protection Agency Environmental Project No. 839


### Glossary

<table>
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<tr>
<th>Term</th>
<th>Definition</th>
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<tbody>
<tr>
<td><strong>Green paper</strong></td>
<td>Green papers are bulletins published by the European Commission on the subject of specific political topics. They describe a series of ideas and proposals on which they invite discussion. Green papers are intended for interested groups and organizations and invite these to participate in consultation offered to the relevant political bodies.</td>
</tr>
<tr>
<td><strong>Integrated product policy (IPP)</strong></td>
<td>Integrated product policy (IPP) examines products and services and their ecological impact at every phase of their life cycle with a view to improving these characteristics; to this end IPP promotes innovations in both products and services.</td>
</tr>
<tr>
<td><strong>Life cycle (economic)</strong></td>
<td>The economic life cycle basically comprises the following phases: devising an idea, product or service development, production, market introduction, market differentiation, and decline.</td>
</tr>
<tr>
<td><strong>Life cycle (materials)</strong></td>
<td>The material life cycle basically comprises the following phases: extracting resources, product manufacture, product distribution, trade, product utilization and consumption, and final disposal.</td>
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</table>
| **Civil society** | There is no legal definition of the concept of “social organizations”. Under “social players” the European Union’s economic and social committee sees the following organizations:  
  - The so-called social partners (bodies representing the two sides of industry, i.e. trade unions, employer associations)  
  - Social and economic associations not included in the above social partners in the narrowest sense  
  - Non-governmental organizations (NGO) in which people pursue common objectives, e.g. environmental organizations, human rights organizations, consumer protection associations, welfare institutions, further education and training institutions  
  - Community-based organizations (CBO) i.e. organizations that emerge from the grass-roots core of society and pursue objectives important to their members Examples include youth organizations, family associations, and all organizations via which the population can participate in communal life  
  - Religious communities. |
9 Contacts, Internet sources

This brochure concludes by listing various supplementary sources of information, important contact partners, and institutions in Germany and abroad.

CONTACT PARTNERS IN GERMANY - FEDERAL GOVERNMENT INSTITUTIONS

Bundesministerium für Umwelt, Naturschutz und Reaktorsicherheit (BMU)
Alexanderplatz 6,
D-10178 Berlin, Germany
Tel: ++49-(0)1888/ 305-0
Fax: ++49-(0)1888/ 305-4375
Internet: www.bmu.de

Umweltbundesamt (UBA)
Bismarckplatz 1,
D-14193 Berlin, Germany
Tel: ++49-(0)30/ 8903-0
Fax: ++49-(0)30/ 8903-2285
Internet: www.umweltbundesamt.de

Bundesministerium für Bildung, Wissenschaft, Forschung und Technologie (BMBF)
Hannoversche Straße 28-30,
D-10115 Berlin, Germany
Tel: ++49-(0)1888/ 57-0
Fax: ++49-(0)1888/ 57-83601
Internet: www.bmbf.de

CONTACT PARTNERS IN GERMANY - BUNDESLAND INSTITUTIONS

Baden-Württemberg: Ministerium für Umwelt und Verkehr
Kernerplatz 9,
D-70182 Stuttgart, Germany
Tel: ++49-(0)711/ 126-0
Fax: ++49-(0)711/ 126-2881
Internet: www.uvm.baden-wuerttemberg.de

Bayern: Staatsministerium für Landesentwicklung und Umweltfragen
Rosenkavalierplatz 2,
D-81925 München, Germany
Tel: ++49-(0)89/ 9214-0
Fax: ++49-(0)89/ 9214-2266
Internet: www.stmugv.bayern.de

Berlin: Senatsverwaltung für Stadtentwicklung
Württembergische Str. 6,
D-10707 Berlin, Germany
Tel: ++49-(0)-30/ 90-0
Fax: ++49-(0)-30/ 90-20 52 64
Internet: www.stadtentwicklung.berlin.de

Brandenburg: Ministerium für Landwirtschaft, Umweltschutz und Raumordnung
Hennich-Mann-Allee 103,
D-14473 Potsdam, Germany
Tel: ++49-(0)-331/ 866-0
Fax: ++49-(0)-331/ 866-70 03
Internet: www.mlur.brandenburg.de

Bremen: Senator für Bau und Umwelt
Hanseatenhof 5,
D-28195 Bremen, Germany
Tel: ++49-(0)-421/ 361-2516
Fax: ++49-(0)-421/ 361-60 13
Internet: www.umwelt.bremen.de
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<th>Fax Numbers</th>
<th>Internet</th>
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<tr>
<td>Hamburg</td>
<td>Umweltbehörde der Freien und Hansestadt Hamburg</td>
<td>Tel: ++49-(0)40/ 42845-0</td>
<td>Fax: ++49-(0)40/ 42845-3293</td>
<td><a href="http://www.hamburg.de">www.hamburg.de</a></td>
</tr>
<tr>
<td>Hessen</td>
<td>Hessisches Ministerium für Umwelt, Landwirtschaft und Forsten</td>
<td>Mainzer Str. 80, Wiesbaden, Germany</td>
<td>Tel: ++49-(0)611/ 815-0</td>
<td><a href="http://www.mulf.hessen.de">www.mulf.hessen.de</a></td>
</tr>
<tr>
<td>Mecklenburg-Vorpommern</td>
<td>Umweltministerium</td>
<td>Schloßstr. 6-8, Schwerin, Germany</td>
<td>Tel: ++49-(0)385/ 588-0</td>
<td><a href="http://www.um.mv-regierung.de">www.um.mv-regierung.de</a></td>
</tr>
<tr>
<td>Niedersachsen</td>
<td>Umweltministerium</td>
<td>Archivstr. 2, Hannover, Germany</td>
<td>Tel: ++49-(0)511/ 120-0</td>
<td><a href="http://www.mu1.niedersachsen.de">www.mu1.niedersachsen.de</a></td>
</tr>
<tr>
<td>Nordrhein-Westfalen</td>
<td>Ministerium für Umwelt, Raumordnung und Landwirtschaft</td>
<td>Schwannstr. 3, Düsseldorf, Germany</td>
<td>Tel: ++49-(0)211/ 4566-0</td>
<td><a href="http://www.murl.nrw.de">www.murl.nrw.de</a></td>
</tr>
<tr>
<td>Rheinland-Pfalz</td>
<td>Ministerium für Umwelt und Forsten</td>
<td>Kaiser-Friedrich-Str. 1, Mainz, Germany</td>
<td>Tel: ++49-(0)6131/ 16-0</td>
<td><a href="http://www.muf.rpl.de">www.muf.rpl.de</a></td>
</tr>
<tr>
<td>Saarland</td>
<td>Ministerium für Umwelt</td>
<td>Keplerstr. 18, Saarbrücken, Germany</td>
<td>Tel: ++49-(0)681/ 501-00</td>
<td><a href="http://www.umwelt.saarland.de">www.umwelt.saarland.de</a></td>
</tr>
<tr>
<td>Sachsen</td>
<td>Sächsisches Staatsministerium für Umwelt und Landwirtschaft</td>
<td>Archivstraße 1, Dresden, Germany</td>
<td>Tel: ++49-(0)351/ 564-0</td>
<td><a href="http://www.smul.sachsen.de/de/wu/index.html">www.smul.sachsen.de/de/wu/index.html</a></td>
</tr>
<tr>
<td>Sachsen-Anhalt</td>
<td>Ministerium für Raumordnung, Landwirtschaft und Umwelt</td>
<td>Ölenstedter Str. 4, Magdeburg, Germany</td>
<td>Tel: ++49-(0)391/ 567-01</td>
<td><a href="http://www.mu.sachsen-anhalt.de">www.mu.sachsen-anhalt.de</a></td>
</tr>
<tr>
<td>Schleswig-Holstein</td>
<td>Ministerium für Umwelt, Natur und Forsten</td>
<td>Mercatorstr. 3, Kiel, Germany</td>
<td>Tel: ++49-(0)431/988-0</td>
<td><a href="http://www.schleswig-holstein.de">www.schleswig-holstein.de</a></td>
</tr>
<tr>
<td>Thüringen</td>
<td>Ministerium für Landwirtschaft, Naturschutz und Umwelt</td>
<td>Beethovenstr. 3, Erfurt, Germany</td>
<td>Tel: ++49-(0)361/ 379-00</td>
<td><a href="http://www.thueringen.de">www.thueringen.de</a></td>
</tr>
</tbody>
</table>
**INTERNATIONAL INSTITUTIONS**

Europäische Kommission – Generaldirektion Umwelt  
Rue de la Loi 200,  
B-1049 Bruxelles, Belgium  
Tel: ++32-229 58312  
Fax: ++32-229 96198  
Internet: http://europa.eu.int/comm/environment

European Environment Agency (EEA),  
Kongens Nytorv 6,  
DK-1050 Copenhagen, Denmark  
Tel: ++45 33-36 7100,  
Fax: ++45 33-36 7199,  
Internet: http://www.eea.eu.int

Organisation for Economic Co-Operation and Development (OECD),  
2, Rue André Pascal,  
F-75775 Paris Cedex 16, France  
Tel: ++33-(0)1-45-248200,  
Fax: ++33-(0)1-44-30 6399  
Internet: www.oecd.org

United Nations Environment Program (UNEP),  
United Nations Avenue, Gigiri,  
PO Box 30552, Nairobi, Kenya,  
Tel: ++254-2-62-1234,  
Fax: ++254-2-62-4489,  
Internet: www.unep.org

**ENVIRONMENT MINISTRIES IN OTHER COUNTRIES**

Austria:  
Bundesministerium für Land- und Forstwirtschaft, Umwelt und Wasserwirtschaft,  
Stubenring 1,  
A-10101 Wien,  
Tel: ++43-1-711000,  
Fax: ++43-1711 00 2140,  
Internet: www.lebensministerium.at

Belgium:  
Belgian Ministry for Social Affairs, Public Health and the Environment,  
Boulevard Pachéco 19 Bte 5,  
B-1010 Bruxelles  
Tel: ++32-2-2104887,  
Fax: ++32-2-2104852,  
Internet: www.environment.fgov.be

Denmark:  
Ministry of the Environment,  
Hojbro Plads 4,  
DK-1200 København K,  
Tel: ++45-33-927600,  
Fax: ++45-33-322227,  
Internet: www.mim.dk

Finland:  
Ministry of the Environment,  
Kasarmikatu 25, Helsinki,  
PO Box 35, FIN-00023 Government,  
Tel: ++358-9-160-07  
Fax: ++358-9-160-39545,  
Internet: www.ymparisto.fi/eng

France:  
Ministère de Developpement Durable et de l’Ecologie,  
20 avenue de Séger,  
F-75302 Paris 07 SP,  
Tel: ++33-(0)1-42-192021,  
Fax: ++33-(0)1-42 19 10 39  
Internet: http://www.environnement.gouv.fr/default.htm

Greece:  
Ministry of Environment, Physical Planning and Public Works,  
Amaliados 17,  
GR-Athens 115 23,  
Tel: ++30-210-6415700,  
Fax:+30-164 27 520,  
Internet: www.minenv.gr
Ireland: Department of the Environment, Heritage and Local Government, Custom House, IR-Dublin 1; Secretariat to Ministers, Press and information Unit, Tel: ++353-1-888-2000, Fax: ++353-1-888-2888, Internet: www.environ.ie

Italy: Ministero dell’Ambiente e delle Tutela del Territorio, Via Cristoforo Colombo, n.44, I-00147 Roma, Tel: ++39-065 7221, Fax: ++39-065 7225 995, Internet: www.minambiente.it


Luxembourg: Ministère de l’Environnement, Bureaux 18, Montée de la Pétrusse, L-2918 Luxemburg, Tel: ++352-478 6824, Fax: ++352-40 04 10, Internet: www.mev.etat.lu

Netherlands: Ministry of Spatial Planning, Housing and the Environment, Rijnstraat 8, NL-2515 XP Den Haag, Tel: ++31-70-339-3939, Fax: ++31-70 339 1306, Internet: www.vrom.nl

Norway: Ministry of the Environment, P. O. Box 8013 Dep, N-0030 Oslo, Tel: ++47-22-249-090, Fax: ++47-22-249-560, Internet: http://odin.dep.no/md/english/index-b-n-a.htm

Portugal: Ministry of Towns, Territorial Planning and Environment, Rua de O Século 51, P-1200 433 Lisboa, Tel: ++35-1-213-23-2500, Fax: ++35-1-213-23-1539, Internet: http://www.dga.min-amb.pt

Spain: Ministerio de Medio Ambiente, Pza. San Juan de la Cruz s/n, E-28071 Madrid, Tel: ++34-91-597-6000, Fax: ++34-91-597-6349, Internet: http://www.mma.es

Sweden: Ministry of the Environment, Tegelbacken 2, SE- 103 33 Stockholm, Tel: ++46-8-4051000, Fax: ++46-8-219628, Internet: http://miljo.regeringen.se/english

<table>
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<tr>
<th>Environment Ministries in EU Accession Countries</th>
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<tr>
<td><strong>Cyprus:</strong> Ministry of Agriculture, Natural Resources and Environment, Loukis Akritas Av., 1411 Lifikosia, Tel: ++357-22408305, Fax: ++357-22781196, Internet: <a href="http://www.cyprus.gov.cy">www.cyprus.gov.cy</a></td>
</tr>
<tr>
<td><strong>Czech Republic:</strong> Ministry of the Environment, Vrosicka 68, CZ-100 10 Praha 10, Tel: ++42-02-67-121, Fax: ++42-02-67-308, Internet: <a href="http://www.env.cz">www.env.cz</a></td>
</tr>
<tr>
<td><strong>Estonia:</strong> Ministry of the Environment, Toompuistee 24, EE - 15172 Tallin, Tel: ++371-62628-02, Fax: ++371-62628-1, Internet: <a href="http://www.envir.ee">www.envir.ee</a></td>
</tr>
<tr>
<td><strong>Hungary:</strong> Ministry of Environment and Water, Fő Street 44-50, HU-1011 Budapest, Tel: ++36-80-401111, Fax:+36-1201 2491 Internet: <a href="http://www.ktm.hu">www.ktm.hu</a></td>
</tr>
<tr>
<td><strong>Latvia:</strong> Ministry of Environment, Peldu Street 25, LV-1494 Riga, Tel: ++371-7026418, Fax: ++371-7820442, Internet: <a href="http://www.vidm.gov.lv">www.vidm.gov.lv</a></td>
</tr>
<tr>
<td><strong>Lithuania:</strong> Ministry of Environment, 4/9 A. Jaksto, LT-2600 Vilnius, Tel: ++375-2663661, Fax: ++375-2663663</td>
</tr>
<tr>
<td><strong>Malta:</strong> Ministry for Rural Affairs and the Environment, Barrier Wharf, Valetta CMR 02, Malta, Tel: ++356-22952208, Fax: ++356-22952209, Internet: <a href="http://mrae.gov.mt">http://mrae.gov.mt</a></td>
</tr>
<tr>
<td><strong>Poland:</strong> Ministry of Environment, ul. Wawelska 52/64, PL-02-922 Warszawa, Tel: ++48-22-679-2900, Fax:+48-22 579 2263 Internet: <a href="http://www.mos.gov.pl">www.mos.gov.pl</a></td>
</tr>
<tr>
<td><strong>Slovakia:</strong> Ministerstvo Zivotneho Prostredu SR, Nam L. Stura, SK 81235 Bratislava 1, Tel: ++421-2-5956-1111, Fax: ++421-2-5956-2031, Internet: <a href="http://www.lifeenv.gov.sk">http://www.lifeenv.gov.sk</a></td>
</tr>
<tr>
<td><strong>Slovenia:</strong> Ministry of Environment, Spatial Planning and Energy, Dunajska c.48, PO BOX 653, SI-1000 Ljubljana, Tel: ++386-1478-7400, Fax: ++386-1478 7423, Internet: <a href="http://www.sgov.si">www.sgov.si</a></td>
</tr>
</tbody>
</table>
INSTITUTIONS AND ASSOCIATIONS

BDI - Bundesverband der Deutschen Industrie e.V.,
Breite Straße 29,
D-10178 Berlin, Germany
Tel: ++49-(0)30-2028-0,
Fax: ++49-(0)30-2028-2450,
Internet: www.bdi-online.de

BUND - Bund für Umwelt- und Naturschutz Deutschland e.V.,
Bundesgeschäftsstelle, Am Köllnischen Park 1,
D-10179 Berlin, Germany
Tel: ++49-(0)30-275864-0,
Fax: ++49-(0)30-275864-40,
Internet: www.bund.net

DGB - Deutscher Gewerkschaftsbund,
Hans-Böckler-Str. 39,
D-40476 Düsseldorf, Germany
Tel: ++49-(0)211-4301-0,
Fax: ++49-(0)211-4301-111,
Internet: http://www.dgb.de

Econsense – Forum Nachhaltige Entwicklung,
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D-10178 Berlin, Germany
Tel: ++49-(0)30-2028-1474,
Fax: ++49-(0)30-2028-2474,
Internet: www.econsense.de

future e.V.,
future Geschäftsstelle, Dr. Udo Westermann, Am Hof Schultmann 63,
D-48163 Münster, Germany
Tel: ++49-(0)251-97316-34,
Fax: ++49-(0)251-97316-35,
Internet: www.future-ev.de

Industrieverband Körperpflege- und Waschmittel e.V.,
Karlstraße 21,
D-60329 Frankfurt am Main, Germany
Tel: ++49-(0)69-25-561322,
Fax: ++49-(0)69-25-0345,
Internet: www.ikw.org

SETAC - Society for Environmental Toxicology and Chemistry, SETAC Europe,
Avenue de la Toison d’Or 67,
B-1060 Brussels, Belgium
Tel: ++32-2-77-27281,
Fax: ++32-2-77-05388,
Internet: www.setac.org/europe.html

Unternehmensgrün e.V.,
Verband zur Förderung umweltgerechten Wirtschaftens, Hermannstraße 5a,
D-70178 Stuttgart, Germany
Tel: ++49-(0)711-61595-10,
Fax: ++49-(0)711-61595-40,
Internet: www.unternehmensgruen.de

Verbraucherzentrale Bundesverband e.V.,
Markgrafenstraße 66,
D-10969 Berlin, Germany
Tel: ++49-(0)30-256800-0,
Fax: ++49-(0)30-
Internet: www.vzbv.de
IPP in the Internet

http://www.ipp-bayern.de
Bavarian IPP projects

http://www.ioew.de/governance
Summer academy lectures on IPP

http://www.coup21.de
Internet site for Nürnberg “COUP 21” initiative

http://www.defra.gov.uk/environment/consumerprod/index.htm
IPP activities in the United Kingdom

http://www.internat.naturvardsverket.se
IPP activities of the Swedish environmental authority

http://www.stmugv.bayern.de/de/abfall
IPP activities in the Bundesland of Bavaria

http://www.uvm.baden-wuerttemberg.de
IPP activities in the Bundesland of Baden-Württemberg

IPP activities in Switzerland

http://www.europa.eu.int/com/environment/ipp
IPP activities of the EU DG Environment

http://www.cfsd.org.uk/ipp-epd/index.html
Overview of work and activities by the “Centre for sustainable product design” in the UK

http://www.unepetie.org/pc/sustain/design/design-subpage.htm
Internet site of the United Nations Environment Program (UNEP)
information on sustainable consumption, eco-design, production and consumption patterns