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EUROPEAN COMMISSION

Brussels, 21.12.2009
SEC(2009)1707 final

COMMISSION STAFF WORKING DOCUMENT

Accompanying

**the Report from the Commission to the Council, the European Parliament, the
European and Social Committee and the Committee of the regions**

On the State of Implementation of Integrated Product Policy

COM(2009)693 final

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On the State of Implementation of Integrated Product Policy

ANNEX I-GLOSSARY-MAIN ACRONYMS

CSD: UN Commission on Sustainable Development

EIPRO: Environmental Impact of PROducts (JRC Study)

ELCD: European Reference Life Cycle Database

ELV: End-of-Life Vehicles Directive

EMAS: Environmental Management and Audit Scheme

ETAP: Environmental Technologies Action Programme

EU: European Union

GPP: Green Public Procurement

ILCD: International Reference Life Cycle Data System

IMPRO: IMprovement of PROducts (JRC Study)

IPP: Integrated Product Policy

ISO: International Standard Organization

JRC-IES: Joint Research Centre, Institute for Environment and Sustainability

JRC-IPTS: Joint Research Centre, Institute for Prospective Technological Studies

LCA: Life Cycle Assessment

LCIA: Life Cycle Impact Assessment

MBIs: Market Based Instruments

ROHS: Restriction of the use of certain Hazardous Substances Directive

REACH: Registration, Evaluation, Authorisation and Restriction of Chemical substances

SCP/SIP: Sustainable Consumption and Production/Sustainable Industrial Policy

SDS: Sustainable Development Strategy

SME: Small and Medium Enterprise

WEEE: Waste Electrical and Electronic Equipment Directive

ANNEX II

INTRODUCTION

On 7th February 2001, the European Commission adopted a Green Paper on Integrated Product Policy (IPP)¹ with the objective of launching a debate on the role and possible measures that could be taken at European Union level. Based on its Green Paper and the following stakeholder consultations, the European Commission published the Communication on IPP in June 2003.² IPP seeks to minimise the environmentally negative impacts of products by looking at all phases of a product's life-cycle and taking action where those impacts can be reduced best and most cost-effectively. In accordance with five key principles, and taking into account the wide variety of available products and stakeholders involved, the IPP approach calls for the use of a combination of different policy instruments.

Many concerns have been raised -both internationally and at the European level- about the increasing unsustainable consumption and production patterns, which are at the roots of many environmental problems through excessive quantities of natural resources consumed and the ensuing degradation of water, air, soil and bio-systems. Unnecessarily high rates of waste generated, greenhouse gas emissions and loss of biodiversity result from this. These increasing trends stand in the way of sustainable development, threatening to compromise the needs of less developed regions and future generations. To achieve sustainable development - one of the fundamental objectives of the European Union- economic growth needs to be decoupled from further environmental degradation. The European Commission has been working actively to develop innovative policies in this field, and IPP is one of the key initiatives, being an integral part of the EU Sustainable Development Strategy.

In its conclusion the Council welcomed the IPP Communication, supporting its principles and the European Commission *"intention to encourage relevant actors to include in their policies objectives to reduce environmental impacts of all products aiming at a continuous improvement of products and services produced in their respective sectors"*.³ The European Parliament, in its resolution,⁴ welcomed as well the IPP Communication but regretted that *"it provides only limited guidance on how to move society in the direction of truly sustainable systems of product development and design."*

In its Communication the European Commission undertook to *"... prepare a report on progress being made in implementing IPP and submit it to the European Parliament and Council"*. The present staff working document accompanies and completes the Communication containing the report, providing a more complete overview of IPP implementation not only at the EU level, but also in Member States, and by stakeholders, including industry and civil society organizations. It is based on information collected under the study "Reporting on the Implementation of Integrated Product Policy",⁵ commissioned by

¹ COM (2001) 68.

² COM (2003) 302.

³ Council Conclusions of 27 October 2003.

⁴ European Parliament Resolution (2004) 0349.

⁵ See <http://ec.europa.eu/environment/ipp/studiesevents.htm>

the European Commission in 2008, which has taken into consideration the list of potential IPP policies, actions, and measures outlined in the final report by the Working Group on IPP Reporting Formats, submitted to the Commission in December 2006 (WGRF, 2006). It furthermore gives account of subsequent related achievements at EU level.

In particular, the European Commission presented, in July 2008, an Action Plan on Sustainable Consumption and Production and Sustainable Industrial Policy (SCP/SIP),⁶ which at its core establishes an integrated framework to improve the energy and environmental performance of products and foster their uptake by consumers.

The structure of this working document follows the recommendations of the Working Group on IPP reporting formats and is based on the structure of the IPP Communication:

- (1) IPP approach
- (2) EU IPP strategy
- (3) Establishing the framework conditions for continuous environmental improvement
- (4) Developing a focus on particular products
- (5) Co-ordination and integration

1. IPP APPROACH

IPP is based on five key principles, which are: a) life-cycle thinking, b) working with the market, c) stakeholder involvement, d) continuous improvement and e) a variety of policy instruments. This section analyses the integration of these guiding principles by different stakeholders in recent years.

(a) Life-cycle thinking

Life-cycle thinking is the consideration of the supply chains, use, as well as the end of life management associated the provision of goods and services (collectively termed products) – sometimes called "from cradle to grave". The environmental impacts and the resources consumed associated with a product's life cycle are assessed. Life Cycle Assessment (LCA) is one tool, standardised in ISO14040/44, that quantitatively supports life-cycle thinking. By taking a life-cycle approach, the aim is to help avoid the shifting of burdens – from one stage in the life-cycle such as "use" to another such as "production", from one country to another (possibly outside of the EU), as well as from one impact category such as climate change to another such as increased land use or emissions of carcinogenic substances.

Various policies and legal instruments at the EU level in 2003 already integrated life-cycle thinking to a varying extent, e.g. the Eco-label Regulation, the EMAS Regulation, the Directive on Packaging and Packaging Waste, the Waste Electrical and Electronic Equipment (WEEE) Directive, the End-of-Life Vehicles Directive (ELV), the Batteries Directive and the RoHS Directive.⁷ Following the IPP Communication, life-cycle thinking has been taken up as

⁶ COM (2008) 397.

⁷ Regulation (EC) 1980/2000 of the European Parliament and of the Council on a revised Community eco-label award and scheme; Regulation (EC) 761/2001 of the European Parliament and of the Council

a core element in the Thematic Strategies on the Sustainable Use of Natural Resources.⁸ Subsequently, it was carried further as a central component of the SCP/SIP Action Plan and the proposed integrated and dynamic policy framework for smarter consumption and better products. In particular, it is a basic principle of the Ecodesign Directive, which has recently been extended to energy-related products,⁹ and it has been taken up in the revised Ecolabel Regulation, the revised Directive on Energy Performance of Buildings,¹⁰ and the revised Waste Framework Directive. Through the “Impact Assessment” process life-cycle thinking has become a central consideration of new European Commission initiatives on environmental product, resources and waste policy and legislation.

An important initiative directly resulting from the IPP Communication is the “European Platform on Life Cycle Assessment”,¹¹ which is managed by the European Commission’s Joint Research Centre, Institute for Environment and Sustainability (JRC-IES) together with the DG Environment, as explained in paragraph 3) (b). This helps support the scientific robustness, consistency, and quality-assurance of data, methods, and assessments required to support life-cycle thinking and assessment in policy.

The life-cycle thinking is also applied increasingly in the national policies and measures of different Member States, but each Member States has a different way of integrating this aspect. Collected evidence indicates that product policies and related actions currently being implemented (or planned) in most of the Member States integrate a life-cycle approach.

Some European consumer organisations have acknowledged the importance of informing consumers about products’ impacts during their whole life-cycle and different stakeholders from the industry (manufacturers, retailers, trade organisations, recyclers, waste manager associations, etc.) support an approach that takes account of competitiveness issues and looks at reducing environmental impacts where they are most appropriate and effective in the life-cycle of a product. As far as industry is concerned, awareness regarding life-cycle thinking in certain SMEs is less advanced, even though there are large differences depending on the specific position of the enterprise in the product supply chain, sector, product group, and country.

(b) Working with the market

The IPP Communication calls for setting appropriate incentives so that the market moves in a more sustainable direction by encouraging the supply and demand of greener products. The European Commission has promoted and implemented measures targeting both the supply side (development of more energy and resource efficient products by means of directives such as the Ecodesign Directive) and the demand side (mandatory Energy Labelling, and voluntary

allowing voluntary participation by organizations in a Community eco-management and audit scheme (EMAS); Directive 94/62/EC on Packaging and Packaging Waste; Directive 2002/96/EC of the European Parliament and the Council on Waste Electrical and Electronic Equipment; Directive 2000/53/EC on End-of life vehicles; Directive 91/157/EEC on batteries and accumulators containing certain dangerous substances; Directive 2002/95/EC on the Restriction of the use of certain hazardous substances in electrical and electronic equipment ;

⁸ COM (2005) 670.

⁹ Directive 2009/125/EC of the European Parliament and of the Council establishing a framework for the setting of Ecodesign requirements for energy-related products

¹⁰ Directive 2002/91/EC of the European parliament and of the Council of 16 December 2002, on the energy performance of buildings. O.J. L 1/65 of 4.1.2003).

¹¹ See <http://ict.jrc.ec.europa.eu/eplca>

Ecolabel to support consumer choice for greener products, addressing public demand by promoting Green Public Procurement - GPP), largely building on the principle of working with the market. The SCP/SIP Action Plan integrates this approach further by providing for, on one hand, measures to promote the supply of more energy and resource efficient products and, on the other hand, to support demand through improved availability of green products to better informed consumers (via Energy Label, Ecolabel and the Retail Forum, for instance) and GPP. The European Commission also proposed to harmonise at which performance level Member States would grant financial incentives for environmentally highly performing products or provide for 'green' public procurement, so as to fully use the potential of the Internal Market. So far, it seems that the focus –both at Member States and EU level- has been on the supply side and the public demand side, as well as on labelling as an instrument to address private demand. Further promoting "green" private demand appears to offer significant additional potential.

Most Member States implement the “working with the market” principle to some extent. Some Member States such as France or the United Kingdom take stronger action to drive demand for greener products and by doing so promote greater efficiency of products. To increase demand, Member States can either use product policy, procurement policy, financial incentives for greener products or fiscal policy to increase the price of energy or resources - and so increase the savings from more efficient products. The European Commission is investigating the benefits of the use of financial incentives for products, an area where common actions across Member States would drive the market. In addition, the use of price-mechanisms could be better coordinated through IPP.

(c) Stakeholder involvement

Another important principle present in EU policy developments and also included in the IPP Communication is to involve all stakeholders during the different stages of policy development and implementation as well as to encourage co-operation among stakeholders in general. Stakeholder involvement has been important during the implementation of the IPP Communication. For instance, the IPP Regular Meetings, organised bi-annually by the European Commission with the Member States representatives and key stakeholders, provide a forum to report and inform the Member States and stakeholders on the IPP related activities of the European Commission. It also serves for an exchange of information on the actions taken by the Member States and other stakeholders in this direction. Furthermore, active stakeholder participation was also observed during the identification and execution of voluntary pilot projects to demonstrate how IPP can work in practice.

Another example is the elaboration of the handbook of technical guidance documents for LCA as part of the European Platform on Life Cycle Assessment, both of which were foreseen in the IPP Communication as deliverables. The developments involve regular stakeholder dialogue and input including 16 formal agreements with key European Industry Associations, Memorandum of Understanding with several key trade partners (China, Japan, Brazil, among others), and 2 international advisory groups (tool and database developers, and life cycle impact assessment methodology providers).

Most Member States consider that the level of involvement of stakeholders in relevant national policies and measures is generally good. In some Member States (i.e. Germany), stakeholder consultation dates back to the 70s, and this experience has been replicated in many Member States with the establishment of national dialogue processes or platforms on SCP with all relevant stakeholder groups (France, Belgium, Netherlands, Sweden). In the

United Kingdom, different stakeholder groups are involved in the design of policy instruments and systematic database of stakeholders in the context of SCP has been developed.

(d) Continuous improvement

Improvements can often be made to decrease a product's environmental impact across its life-cycle, whether in design, manufacture, use or disposal, taking into account the parameters set by the market. This philosophy underpins the IPP Communication and many of the initiatives undertaken by the European Commission in this context, such as the Ecodesign Directive, the Ecolabel, the EMAS Regulations (regarding the improvement of organizations' environmental management), the Green Public Procurement Communication as well as other elements of the SCP/SIP Action Plan.

The continuous improvement principle is embedded in the Ecodesign Directive and -in line with the SCP/SIP Action Plan- is further stressed in its application by the definition of voluntary benchmarks to complete binding requirements in its implementing measures. Furthermore, some Member States have institutionalised the principle, which has become part of the national Sustainable Development Strategies, such as for instance in Finland and France.

Furthermore, the European Commission is seeking to identify and stimulate actions on products with the greatest potential for environmental improvement. To this end, two IPP initiatives, the EIPRO and the environmental IMPROvement of PROducts (IMPRO) studies coordinated by the Joint Research Centre, Institute for Prospective Technological Studies (JRC-IPTS),¹² aim to identify products having the greatest environmental impact from a life-cycle perspective and possible ways in which the life-cycle environmental impacts can be reduced for some of these products. Based on the results, the European Commission is developing policy measures for the products identified to have the greatest potential for environmental improvement.

(e) A variety of policy instruments

The IPP approach requires a number of different instruments in reason of the variety of products available in the market and the variety of stakeholders involved. These instruments range from voluntary initiatives to regulations and from the local to the international scale. The tendency is to work with a combination of voluntary approaches (such as Eco-label and EMAS Regulations) and mandatory measures (such as Ecodesign, Energy Labelling, Energy Performance of Buildings, RoHS and WEEE Directives). As some tools for promoting greener production and consumption existed prior to the formulation of IPP, such as the European Eco-label, the real challenge of IPP implementation was to use a coherent and mutually-enforcing set of existing and new tools to achieve the policy objectives. This challenge has been taken up by the SCP/SIP Action Plan, which provides a coherent framework integrating different policy instruments and initiatives (both mandatory and voluntary) to promote resource efficient and eco-friendly products and raise consumer awareness.

The Member States apply different instruments to implement IPP and to support product, technology, and systems level innovations. Green public procurement is the most popular

¹² See <http://ec.europa.eu/environment/ipp/identifying.htm>

instrument used in Member States, followed by labelling and other informative instruments. Life-cycle thinking, research and awareness of Ecodesign are not equally developed in the Member States assessed, while Environmental Management Systems (ISO 14000 and EMAS) seem to be lagging behind.

2. THE EU IPP STRATEGY

The EU IPP primary aim is to reduce the environmental impacts from products throughout their life-cycle, harnessing, where possible, a market driven approach, within which competitiveness concerns are integrated. To achieve this objective, the EU IPP is contributing to addressing the environmental challenges identified in both the Sustainable Development Strategy and the Sixth Environment Action Programme. Without a product dimension the chances of meeting them will be smaller. IPP is also a key part of the implementing measures for the Thematic Strategy on the Sustainable Use of Resources and that on Prevention and Recycling of Waste and closely linked to the Environmental Technologies Action Programme (ETAP). The IPP principles have been taken up and carried over by the SCP/SIP Action Plan. Internationally, IPP and in particular the SCP/SIP Action Plan constitutes a major input to the ten-year framework of programmes on sustainable production and consumption agreed to be developed at the World Summit on Sustainable Development in Johannesburg in September 2002, and which will be developed in consultation with regions and stakeholders throughout the CSD 18-19 cycle.¹³

In implementing the IPP strategy, the European Commission has increasingly focussed on strengthening co-ordination and coherence between existing environment-related product policy instruments to fully exploit the potential synergies and to encourage their integrated development, as documented through the adoption and approach of the SCP/SIP Action Plan.

At the national level, only some Member States (Finland, Sweden, Belgium, and Poland) have specific national strategies for IPP and only two of them (Poland and Belgium) use specifically the term IPP. Most Member States include IPP principles in their national (or sub-national) programmes on SCP and only two Member States (Portugal and UK) have developed plans for a specific IPP strategy. Some Member States, considered frontrunners in environmental product policy such as Denmark (which had a specific IPP strategy until 2001) and Sweden have progressively shifted their approaches: the specific IPP strategy is now integrated or being integrated in other framework approaches addressing SCP (Denmark), or in other strategies, for instance the Swedish Sustainable Development, Governmental Bills and Communications Strategy.

In some Member States, regions sometimes go ahead of the national policies as concerns IPP. This is the case of the Basque government in Spain, where efforts have been put during the last years to develop several actions in the key areas of IPP such as eco-design, LCA, and GPP with the aim of promoting these new environmental issues among all economic actors. Another good example is the Federal State of Bavaria, in Germany, where an IPP unit exists since 2000 in the Bavarian State Ministry of the Environment, Health, and Consumer Protection (StMUGV). IPP became a separate field of activity in the Environmental Pact of Bavaria, between this state and the business community. The main objective of the IPP related activities is to develop and test IPP methodology and instruments.

¹³ Paragraph 14 of the WSSD – Johannesburg Plan of Implementation and paragraph 8 of the General Affairs and External Relations Council’s conclusions of 30.10.2002

Several companies and industrial federations are committed to reduce the impact of their operation and products. The related activities usually include the application of instruments such as Environmental Managements Systems, the adoption of voluntary agreements and sustainable development strategies aiming at improving product stewardship. Some recyclers and waste managers are involved in voluntary agreements and the elaboration of guidelines for the optimal use of waste.

In consumers associations, the IPP related strategies usually aim at increasing consumer awareness about the impact of consumption on the environment and to induce changes towards sustainable consumption patterns.

3. ESTABLISHING THE FRAMEWORK CONDITIONS FOR CONTINUOUS ENVIRONMENTAL IMPROVEMENT

(a) Tools for creating the Right Economic and Legal Framework

The 2003 IPP Communication requires the European Commission to continue to promote and encourage the use of fiscal measures, such as environmental taxes and incentives. The use of Market Based Instruments (MBIs) in environmental policy is continuously taken up in EU policy such as the Sixth Environment Action Programme, the renewed EU Sustainable Development Strategy, and the Lisbon Strategy. Furthermore, in 2007 the European Commission adopted a Green Paper on the use of MBIs in environment policies, and launched a broad consultation on their use in various fields. Nevertheless, the EU's role in practice has been rather small to date and IPP does not seem to have been a driver for any recent developments in the field of environmental-related taxes and incentives at the European Union level.

There is a wide variety of product-related taxes and incentives used in different Member States. Better and most extended examples are related to waste management charges laying in regulatory requirements for producers (producers' responsibility) such as the ELV Directive, WEEE Directive, and the Directive on Packaging and Packaging waste. Most recent developments include eco-taxes on cars and fuels, and also tax incentives to promote the purchase of greener products such as energy efficient appliances and equipment.

Concerning voluntary agreements, the most notable development at EU level was the setting up of a Retail Forum, as one element of the SCP/SIP Action Plan, aiming to reduce the environmental footprint of the retail sector and its supply chain, to promote more sustainable products and to better inform consumers. In parallel, the food industry established the EU Food SCP roundtable to develop a common methodology to assess the environmental impacts of food and drink products. In the context of implementing the Ecodesign Directive, voluntary agreements can play a role as an alternative to mandatory requirements being set through an implementing measure.

As regards standardisation, implementation of the Ecodesign Directive is linked with a number of mandates being given to European standardisation bodies, in particular in relation to testing and verification of compliance. A consortium of European environmental NGOs named ECOS was established in 2002 to ensure the integration of environmental aspects into standardisation ("greening standardisation").

Member States such as Italy, Denmark, the Netherlands, Germany, Sweden and France have been quite active setting voluntary agreements with the industry. In most cases, active

dialogues between governments and different sectoral associations have been established in order to agree on specific actions and targets to be achieved.

(b) Promoting the Application of Life Cycle Thinking

Notably, as a result of the IPP Communication, the European Commission has created a platform to facilitate communication and exchange of information regarding life cycle assessment (LCA) in business and public authorities, by providing reference data and recommended methods for LCA studies. The “European Platform on Life Cycle Assessment” is a project of the European Commission, managed by the JRC-IES together with DG Environment. Its main deliverables to date are:

- a technical guidance handbook on LCA foreseen in the IPP Communication, to become the basis for an International Reference Life Cycle Data System (ILCD);
- the European Reference Life Cycle Database (ELCD), with over 350 quality-assured Life Cycle emission/resource consumption (Inventory) data sets with European market scope for core materials, energy carriers and services primarily provided by working together with industry associations;
- the Recommended Life Cycle Impact Assessment (LCIA) methods and an LCA information hub to ease the access to data and methods and to facilitate knowledge exchange.

Having its foundation in the IPP Communication, the European Platform on LCA supports also the implementation of the Thematic Strategies on the Prevention and Recycling of Waste and on the Sustainable Use of Natural Resources, as well as the implementation of the SCP/SIP Action Plan and life cycle thinking in a growing number of other policies. It is worthwhile noting the significant participation of European industry associations in the European Platform on LCA.¹⁴

Furthermore, the IPP working group on environmental product information examined the issue of life-cycle information throughout the product chain. The final report builds up a practical vision of what actions governments and stakeholders can take to make life-cycle-based product information a real force for environmental improvement, working in combination with the toolbox of other IPP measures and activities.¹⁵

Member States such as the Netherlands, Finland, Denmark, Germany, Sweden and France can be considered as frontrunners in the implementation of life-cycle thinking, based on the variety of measures implemented and tools developed to promote the application of this principle. Italy, Belgium, the United Kingdom, and Poland are also quite active. In the rest of the Member States related activities are very limited or not existing. In some Member States

¹⁴ Some 16 industry associations are member of the platform Advisory Group, which mainly focuses on advice on the development of the recommended LCA methods of the ILCD Handbook, the development of the ILCD data set documentation format, the list of reference elementary flows, and of the recommended LCIA methods and factors. The members of the group commit to provide life cycle inventory (LCI) data sets of their key products (goods or services) and/or processes for publication in the ELCD database. See <http://lca.jrc.ec.europa.eu/lcainfohub/index.vm>.

¹⁵ To access the final report : http://ec.europa.eu/environment/ipp/pdf/20070115_report.pdf

(Denmark, Hungary, Italy, Sweden or Germany), LCA research centres have been created to develop LCA databases and development of specific tools.¹⁶

In general, the life-cycle thinking is well known in many industries such as packaging, chemical, plastics or the metal industry, and large companies. For instance, *Plastics Europe* promotes the use of LCA to take more informed decisions through a better understanding of the human health and environmental impacts of products, processes, and activities relating to plastics.¹⁷ Nevertheless, the practical application of this principle is still limited and it can be particularly challenging for certain SMEs. The results of LCA studies are mainly used internally for product improvement (eco-design) and in some cases for external communication.

Concerning Environmental Managements Systems, there are certain actions presented in the IPP Communication to be carried out by the Commission that refer specifically to EMAS, the EU voluntary instrument which acknowledges organisations that improve their environmental performance on a continuous basis. As part of the SCP/SIP Action Plan, the EMAS Regulation has been revised, with the objective of increasing the uptake of the scheme, and hence overall increasing its positive environmental impact.

All Member States have measures in place to promote EMAS. Particularly active in the implementation of activities on a national level to promote the EMAS scheme are Austria, Belgium, the Czech Republic, Germany, Italy, and Spain. EMAS proved to be less popular with business. Some companies apply Environmental Managements Systems according to both the ISO 14001 standard and the EMAS, while others have developed their EMS at site level and carry out site certifications according to ISO 14001 (in some cases also EMAS verifications). In general, due to EMAS imposing stricter requirements and ISO providing for global application, the uptake of ISO 14001 certification is higher, especially for global companies.

As regards to product design obligations, a number of policies and initiatives of the European Commission have close relevance and direct influence on the improvement of product design. Adding to those adopted prior to the 2003 IPP Communication (e.g. ELV, Energy Performance in Buildings, WEEE and RoHS Directives, EU Ecolabel Regulation and the Directive on batteries and accumulators) policies devised in the following include the Ecodesign Directive and the REACH Regulation. Regarding the Ecodesign Directive, a number of implementing measures have been adopted in 2008 and 2009 to lay down Ecodesign requirements for energy using products, from standby over domestic lighting, to televisions. The Ecodesign Directive can be considered the legislative cornerstone of the SCP/SIP Action Plan and its scope has been extended from energy using products to energy related products. A possible further extension beyond energy-related products will be considered at its review in 2012.

Certain environmental organisations are engaged in contributing and supporting the implementation of the Ecodesign Directive, as it is a high priority in most NGOs working in related areas, due to its high potential beneficial impact. Business Association as well are contributing to the implementation of the Ecodesign Directive (e.g. CECED, Orgalime, EICTA, Digital Europe and CELMA).

¹⁶ See for instance the Swedish CPM (LCA-competence-centra) at Chalmers www.cpm.chalmers.se, co-financed by the government and the industry, with major Swedish companies involved.

¹⁷ See Eco-profiles, <http://www.plasticseurope.org/Content/Default.asp?PageID=1170>.

Product design is also a priority for certain retailers (e.g. IKEA and H&M) and business associations (e.g. CEFIC, ACE, CITPA, CEPI, EuRP, and RREUSE). In the electrical and electronic sector, an increased awareness is observed resulting from the related EC legislations mentioned (RoHS, Ecodesign, WEEE, etc.) and also from the awareness raising efforts made by the European Commission in this direction.

(c) Giving Consumers the Information to Decide

Consumers, whether private, public or individual, play a key role for the commercial success of greener products. Since the adoption of the IPP Communication, the European Commission has developed and encouraged EU-wide tools and frameworks to provide consumers with product information and raise their awareness.

Public purchasers spend 17% of annual European Gross Domestic Product on supply/services and works contracts. Green Public Procurement (GPP) has received growing political attention and, the renewed EU SDS of June 2006 includes the goal of bringing the average level of EU GPP, by 2010, up to the standard achieved by the best performing member states in 2006. Based on indications resulting from a 2005-2006 study, the Communication on GPP presented by the European Commission in 2008 as part of the SCP/SIP Action Plan package proposes a general indicative target of 50 % of GPP by 2010. Furthermore, it establishes a process for setting common voluntary GPP criteria in cooperation with the Member States and relevant stakeholders for "priority" product and service groups, and develops guidance on GPP.¹⁸

The latest study on the collection of statistical information on GPP (2008) gives an overview of the level of GPP in 2006 and 2007 in the 7 best performing Member States: Austria, Denmark, Finland, Germany, the Netherlands, Sweden and the United Kingdom. Efforts undertaken by the so-called Green 7 have led to an average overall level for all countries of 45% GPP of the total procurement value and 55% GPP of the total number of contracts. By buying green products and services, their efforts lead to an average reduction of 25% of CO₂ emissions. Furthermore, it was found that buying 'green' has led to an average decrease in costs of 1%, taking into account the Life Cycle Costs (LCC) of a product or service. Overall, electricity, paper, office IT and furniture are the product groups where GPP is most practised; construction, gardening and transport are the lowest-scoring product groups.

National Action Plans (NAPs) on GPP as called for in the IPP Communication have so far been adopted in Cyprus (2007), Denmark (1994), Finland (2008), France (2007), Italy (2008), Lithuania (2007), Poland (2007), Portugal (2007), Slovakia (2007), Slovenia (2009), Spain (2008), Sweden (2007), United Kingdom (2007). In the remaining Member States, NAPs are either in the process of adoption, or in preparation. The Netherlands is one of the Member States with most ambitious targets and expect to achieve 100% sustainable procurement by central government in 2010; they have furthermore developed GPP criteria for 80 product groups and services. The French national action plan is the more ambitious one in terms of

¹⁸ The guide, Training Toolkit on GPP consists of 3 Modules (strategic, legal and operational) and can be downloaded from the EU GPP website: http://ec.europa.eu/environment/gpp/toolkit_en.htm. Member States are asked to formally endorse and implement the 10 voluntary GPP criteria: criteria have been translated into all EU languages. The 10 priority product and service groups for which GPP criteria have been developed: Construction, Food and catering services, Transport, Electricity, Office IT equipment, Textiles, Paper, Furniture, Cleaning products and services, Gardening products and services.

approach, as it refers to the sustainability of the public procurement. Therefore, besides "pure" environmental criteria, it makes use of social and ethical criteria as well.

Some recent legislative initiatives at European level integrate environmental mandatory requirements for public procurement:

- the Energy Star Regulation 106/2008, which obliges central government and EU institutions to purchase IT equipment complying at least with the energy efficiency requirements set under the Energy Star Regulation;
- Directive 2009/33 on the promotion of clean and energy efficient road transport vehicles, which obliges public authorities and public service providers to take into account energy and other environmental aspects when purchasing road transport vehicles;
- Directive 2006/32 on energy end-use efficiency and energy services, which calls Member States to ensure that the public sector fulfils an exemplary role and ensure that energy efficiency improvement measures are taken by the public sector;
- Under the SCP/SIP Action Plan and as part of the proposed recast of the Energy Labelling Directive, the European Commission has proposed that one of the labelling classes defined under the Energy Labelling Directive is used as a level below which products would not be procured by public bodies and granted financial incentives by Member States. The proposal also aligns the scope with that of the Ecodesign Directive to apply to energy related products.

The primary function of the voluntary EU Ecolabel is to stimulate both the supply and demand of products with a reduced environmental impact. The EU Ecolabel is currently used by participants in the scheme as a tool to help improve environmental performance and also induce an improvement in the performance of other companies in the supply chain. As part of the SCP/SIP proposals, the scheme is being strengthened. This involves widening the number of products and services covered, focusing on those with the most significant environmental impacts and the highest potential for improvement. This broader scope includes the possibility to develop criteria for food and drink products.¹⁹ The EU Ecolabel criteria for a product group should be achievable by the top 10-20% of the best products on the market. The revised EU Ecolabel also reduces bureaucracy and simplifies criteria for companies applying for the label. In the EU around half of the Member States have their own national ecolabel schemes, such as the well-known "Nordic Swan", widely used in Scandinavian countries and the German 'Blue Angel', the first official national ecolabelling scheme worldwide, which now covers 80 products categories with over 10,000 licensed products. Concern has been expressed on the growing number of national ecolabels, which may create confusion for the consumers and constitute a barrier to intra-EU trade. In addition, it should be noted that further complexity could result from the increasing number of carbon and climate labels, which are currently under development in certain Member States on the basis of private-public partnerships. These developments seem to suggest the necessity of a more coordinated approach at EU

¹⁹ Subject to the results of a study to be undertaken by the Commission "... exploring the feasibility of establishing reliable criteria covering environmental performance during the whole life-cycle of such products, including the products of fishing and aquaculture."

level, to avoid confusion for the consumers and prevent disruptions to the smooth functioning of the internal market.

4. DEVELOPING A FOCUS ON PARTICULAR PRODUCTS

(a) Voluntary Pilot Projects

Two voluntary pilot projects were established in 2004 to demonstrate how IPP can work in practice. The chosen products were mobile phones (project lead by Nokia) and tropical wooden garden chairs (lead by Carrefour). In line with the IPP principle of stakeholder involvement, both projects registered an active participation by key stakeholders, ranging from producers to research institutes, from consumers and environmental organizations to governmental authorities.

On the basis of the analysis of the environmental impacts of the products throughout their life-cycle, options to improve these environmental impacts were identified, followed by the analysis of the potential social and economic effects of the improvement options. Finally, viable options for improvement were selected and both project concluded in concrete commitments by stakeholders to improve the environmental impacts of the products in September 2006.²⁰

Some voluntary pilot projects are also been carried out in different Member States. For instance, the projects for developing and testing IPP methodologies and instruments carried out in the Federal State of Bavaria can be considered as an example of good practice in Europe.²¹

(b) Identifying which products have the greatest potential for environmental improvement

The European Commission is seeking to identify and stimulate actions on products with the greatest potential for environmental improvement. This work has been carried out in subsequent phases.

- (1) "Study on external environmental effects related to the life cycle of products and services". This first study consisted in the elaboration and implementation of a life-cycle methodology to help policy makers in defining priorities regarding products and services constituting the European economy. An assessment of life-cycle environmental impacts and life-cycle external costs of about 30 product or service groups was performed in order to identify those with the greatest environmental impact.
- (2) "EIPRO – Environmental Impact of PROducts". This study identifying products consumed in the EU having the greatest environmental impact from a life-cycle perspective was completed in May 2006. It grouped consumption of the society into almost three hundred product categories (sectors), which were assessed in relation to different environmental impact categories, such

²⁰ See <http://ec.europa.eu/environment/ipp/pilot.htm>.

²¹ 16 IPP R&D-projects have been developed, aiming at showing the ecologic and economic win-win situation for all stakeholders when using the IPP approach. See www.ipp-bayern.de

as acidification, toxicity, global warming, ozone depletion, etc. Results suggest that three areas of the economically most important sectors - food and drink, private transportation, and housing - together are responsible for 70-80 percent of environmental impacts of private consumption.

- (3) "IMPRO - environmental Improvement of PROducts". The project was carried out in 2006-2007, focusing on products that are among those with the greatest environmental impacts, as emerged from the EIPRO study. The work was intended to help identify possible ways in which the life-cycle environmental impacts can be reduced for some of these products. The main aims of the studies were: estimate and compare the environmental impacts of the products under a life-cycle perspective; identify the main environmental improvement options related to the product, addressing all the different life-cycle stages and estimate the size of the environmental improvement potentials; and assess the main improvement options regarding their feasibility and potential social and economic impacts. Results are available for three of the product groups: passenger cars, meat products, and buildings.²²

All Member States have reported on product groups that have been previously identified for action. In many cases, the results of the EIPRO, commissioned by the European Commission, was used, among other studies to selecting new product groups. Product panels have been established in several countries. In Denmark, between 1998 and 2005, different product panels were running with members from the whole product supply chain (as far as possible) with the purpose of co-operating on activities to get greener products on the market. There have been product panels for textiles, electronics, goods transportation, buildings, and agricultural products. In Finland, two product panels were established: a textile panel (2001-2003) and furniture panel (2004-continuing). Sweden has initiated two dialogues: one in the retail sector (Future Trade, 1998-2007) and the other in the building sector (Building-Living Dialogue, 1998-2009).²³ The aim of the product panel on the furniture sector is to focus on the environmental load of furniture throughout the life-cycle of each piece and to promote sustainable development in the furniture industry. The United Kingdom has been running the 'Market Transformation Programme' (MTP), which comprised a number of different product panels in different sectors. The main aim of MTP was to identify and develop ideas on how to address the whole supply chain of a product.

5. CO-ORDINATION AND INTEGRATION

In order to enhance coordination, the European Commission is organising IPP Regular Meetings bi-annually with Member States representatives and key stakeholders to provide a forum for the European Commission and Member States and stakeholders to exchange best practices/information on IPP related activities. Within this forum, two working groups were set up to discuss and find solutions for specific subjects relevant for the development of IPP. The Working Group on Reporting Formats reviewed the type of information that could be reported to the European Parliament and Council as stipulated in the IPP Communication and to propose to the European Commission an approach for collecting the necessary information for reporting from Member States and stakeholders. Its conclusions have provided guidance to

²² <http://ec.europa.eu/environment/ipp/identifying.htm>

²³ See www.framtidahandel.se and www.byggabodialogen.se

the drafting of the present report. The Working Group on Environmental Product Information examined the issue of life-cycle information throughout the product chain. It identified the needs, examined the tools, identified the gaps and opportunities, and proposed how the situation should be improved. Both working groups finalised their work at the end of 2006.

Many stakeholders have highlighted the need to further exploit synergies between the various instruments (both voluntary and mandatory), as required by the IPP Communication. In this regard, the SCP/SIP Action Plan has contributed to clarifying the links and to enhance the coherence between the different IPP instruments, providing a single framework for a variety of interlinked activities and instruments. In the implementation of the Action Plan, synergies will be further exploited and constraints between different instrument and tools removed.

In order to increase coordination and coherence, Member States have adopted different approaches. Some have established inter-ministerial working groups (Germany, Finland, Belgium, Sweden and Italy), while others have decided to supervise and coordinate IPP related measures by means of a working group in the specific organism responsible for the implementation of this policy (such as in Denmark). Others, such as Romania, have created committees with members for the national authorities and stakeholders. In the United Kingdom, the government has established a dedicated “Sustainable Products and Materials” division to develop strategies and to take forward the ‘product roadmap’ approach. In France, it is the MEEDDM that specifically supervises and ensures the implementation of the measures related to sustainable consumption, supported by the ADEME.

An example of coordination between different Member States on IPP is the Nordic working groups consisting of representatives from Denmark, Finland, Norway, Sweden and Iceland. This initiative further proves that Nordic countries have been frontrunners in Europe regarding IPP issues.

Different business associations, retailers, and environmental organisations are also engaged in various projects to support sustainable production. For example, in 2005 with the support of the European Commission (DG Enterprise and Industry), ACE carried out a project related to "Evaluation of Environmental Management Systems and their role with respect to product related environmental information". Another example is IKEA, where resources are allocated into environmental projects related to IPP such as forestry-projects, the cotton-project, the low-emission-project, the EcoBuild-project, and the Greenchem-project. Some of these projects are carried out in co-operation with R&D (universities, institutes), specialists and NGOs (e.g. WWF).

6. THE FUTURE OF IPP – INTEGRATION WITH THE SCP/SIP AGENDA

The 2003 IPP Communication undoubtedly had the effect of opening a fruitful debate on the role and possible measures that could be taken at European Union and national level by different actors, from public authorities to industries and civil society organizations, in the attempt to minimise the impacts of products through a combination of policy and legislative tools. It also provided a conceptual framework -based on the life-cycle thinking- which has been successful in strengthening the coordination and coherence between different environment-related product policy instruments.

In the last 6 years, the IPP approach -based on the 5 five principles of life-cycle thinking; working with the market; stakeholder involvement; continuous improvement of products; and the use of a variety of policy instruments- has been successfully integrated in the activities of

the regulators and the relevant stakeholders. These principles are also the pillars of the 2008 SCP/SIP Action Plan, which has become the natural extension and logical prosecution of the process started with the IPP Communication.

The life-cycle thinking is widely applied in EC environmental legislation (i.e. Ecodesign Directive) and commonly used in national policies and measures by Member States. Industries make use of the principle as well, not only to comply with the legislation in force, but also to better understand the impact of the products they produce on human health and the environment. For certain SMEs and consumers, life-cycle thinking might not be easy to adopt, despite the efforts made by some European consumer organizations to inform citizens on the environmental impact of product from cradle to grave. In this context, the LCA instruments developed by JRC are of crucial importance, and JRC on-going work should be further supported to develop a common, authoritative EU reference methodology/data basis for LCA.

Setting appropriate incentives to move the market towards sustainability is one of the objectives of the Communication. To achieve this, it is necessary to work with the market and this principle has been implemented both at EU and national level. Working with the market is also part of the SCP/SIP Action Plan, which makes specific provisions for linking incentives and public procurement with the environmental performance of products. With the notable exception of labelling instruments, it seems, however, that so far the focus – both at Member States and EU level- has been on the supply side and the public demand side, and more could be done to further promote "green" private demand, to reward sustainable product with a wider consumers' demand. Similarly, the EU's role in the promotion of fiscal measures for sustainability has been rather small to date.

Stakeholder involvement was one of the most important elements in the implementation of the IPP Communication at EU and national level. The systematic involvement of stakeholders during the design phase of legislative and non-legislative initiatives has been extremely positive, strengthening the initiatives themselves and increasing their legitimacy and their effectiveness. For instance, the IPP Regular Meetings provided a forum for the European Commission, Member States and key stakeholders to report and inform on relevant IPP activities. This positive experience will be continued and extended, to cover the wider scope of SCP/SIP issues. There are other valuable examples of stakeholder involvement worth mentioning, such as the Ecodesign Consultation Forum, the Retail Forum, the BUILD-UP initiative²⁴ and the EU SCP Food roundtable.

Continuous improvement of products' performance is a clear guiding principle of IPP, which has been taken up by the SCP/SIP Action Plan. Following the ground-breaking studies by JRC (EIPRO and IMPRO), the European Commission has been developing policy measures for the products identified to have the greatest potential for environmental improvement. The principle is extremely useful and pragmatic, in particular because it keeps the IPP-SCP tools updated in face of quick technology change and it allows industry to focus on the most cost-effective improvements. The brightest example is the Ecodesign Directive, with its system of moving benchmark to stimulate progress while providing predictability to the industries concerned.

The IPP approach requires the combination of a number of different tools in reason of the variety of the products marketed and the stakeholders involved, from voluntary instruments to

²⁴ See <http://www.buildup.eu/>.

mandatory measures. As some tools for promoting greener production and consumption existed prior to the formulation of IPP, such as the European Eco-label, the real challenge of IPP implementation was to use a coherent and mutually-enforcing set of existing and new tools to achieve the policy objectives. This challenge has been taken up by the SCP/SIP Action Plan, which provides a coherent framework for different policy instruments and initiatives designed to promote resource efficient and eco-friendly products, while raising consumer awareness. Even though it is not always easy to understand how this wide set of initiatives correlate to the IPP Communication, it is fair to say that the Communication has served as an important platform and reference for the ongoing necessary shift from the "punctual" regulation of production to initiatives and measures to decrease environmental impact in all phases of the life-cycle, including consumption. In this regard, the work undertaken by JRC has provided important figures and methodology for calculation of the environmental impacts from different product groups.

On the basis of these considerations, what is the future for IPP in the EU? It is fair to say that by promoting the continuous improvement of the environmental performance of products and organisations, IPP has fulfilled its promise and contributed to promoting the perception that the environment is an opportunity - also in terms of cost reduction and marketing - and not any longer an obstacle. This is for instance the case for the re-usability of packaging for logistic and the spectacular increase in green claims in advertising registered in recent years.

As this working paper demonstrates, the SCP/SIP Action Plan is carrying forward the process initiated with the IPP Communication with the aim of further unlocking market potentials for more sustainable products and promoting smarter consumption. At this stage -and looking ahead- it seems appropriate to further integrate the two processes and make IPP a significant element of the SCP/SIP agenda. This new, strengthened and coordinated process will need to be integrated also with the implementation of the Thematic Strategy on sustainable use of natural resources, including the related issues of managing ecosystem services. The challenge towards the 2012 review of the SCP/SIP Action Plan is coordinated and effective implementation, with the view of addressing broader sustainability aspects if suitable methodologies for assessment will eventually become available.

ANNEX III: LIST OF IPP REGULAR MEETINGS

- 24 February 2004
- 20 September 2004
- 2 March 2005
- 23 November 2005
- 6 June 2006
- 15 November 2006
- 2 October 2007
- 21 April 2008
- 2 December 2008
- 6 June 2009

ANNEX IV: LIST OF ADOPTED EUP IMPLEMENTING MEASURES

	Eco-design and Labelling measures	Type of measure	Final Adoption (by EC)	Revision	Others
1	Standby and off mode losses	Ecodesign	YES 18 December 2008	6 years (18 December 2014)	- Standardisation mandate: power consumption measurement
2	Simple Set top boxes	Ecodesign	YES 26 February 2009	5 years (26 February 2014)	
3	Tertiary sector Lighting (street & office)	Ecodesign	YES 18 March 2009	5 years (18 March 2014)	
4	Domestic Lighting²⁵ (non-directional households lamps)	Ecodesign	YES 18 March 2009	5 years (18 March 2014)	- During the revision, remove CFL UV radiation requirements from Table 4 provided the related standards are updated and harmonised by then
	Amendment on ultraviolet radiation	Ecodesign	<i>September 2009</i>		- Mandate SCENIHR to examine scientific evidence on the health impact of UV radiation from artificial light - Introduce UV radiation limits into CFL and LED safety standards - Update existing UV radiation limits in halogen lamp safety standards
5	External Power Supplies (battery chargers, etc.)	Ecodesign	YES 7 April 2009	4 years (7 April 2013)	- Standardisation mandate: measurements of no-load condition electric power consumption and average active efficiency of EPS

²⁵

Ecolabel exists

6	Electric Motors	Ecodesign	July 2009	7 years	<ul style="list-style-type: none"> - Standardisation mandate: variable speed drives - The review will include resource efficiency, re-use and recycling and the level of measurement uncertainty
7	Domestic Refrigerators/Freezers*	Ecodesign	July 2009	5 years <i>(2 years -wine storage appliances)</i>	<ul style="list-style-type: none"> - Standardisation mandate: procedures and methods for measuring the energy and water consumption, washing efficiency, spin-drying efficiency, programme time, spin speed, noise emissions, product specific low power modes, left-on mode duration and rated capacity - The review shall in particular assess the verification tolerances of Annex V and the possibilities for removing or reducing the values of the correction factors of Annex IV. - Adopt specific ecodesign requirements for wine storage appliances no later than in two years.
		Labelling			
8	TVs*	Ecodesign	July 2009	3 years	
		Labelling			
9	Circulators		July 2009	1 January 2017 <i>(cca 8 years)</i>	<ul style="list-style-type: none"> - The review will include the assessment of design options that can facilitate re-use and recycling. - Review the methodology for calculating the energy efficient index (Annex II) for glandless circulators integrated in products before 1 January 2012