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**COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN
PARLIAMENT AND THE COUNCIL**

**Building the Single Market for Green Products: Facilitating better information on the
environmental performance of products and organisations**

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**Impact Assessment Report for the COMMUNICATION FROM THE COMMISSION
TO THE EUROPEAN PARLIAMENT AND THE COUNCIL**

Building the Single Market for Green Products:

**Facilitating better information on the environmental performance of products and
organisations**

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Glossary

CAP – Common Agricultural Policy
CRR – Centre for Retail Research
CSR – Corporate Social Responsibility
CWP – Commission Work Programme
DEFRA – UK Department for Environment, Food and Rural Affairs
EAP – Environment Action Programme
EESC – European Economic and Social Committee
ELCD database – European Reference Life Cycle Database
EMAS – Eco-Management and Audit Scheme
ETS – Emissions Trading System
GHG emissions – Green House Gas emissions
GPP – Green Public Procurement
GRI – Global Reporting Initiative
HANPP – Human appropriation of net primary production
IA – Impact Assessment
IAG – Impact Assessment Guidelines
ICT – Information & Communication Technologies
ILCD – International Reference Life Cycle Data System
JRC – European Commission's Joint Research Centre
LCA – Life Cycle Assessment
LCC – Life Cycle Costing
MED – Europe in the Mediterranean programme
MS – Member State
OEF – Organisation Environmental Footprint
OEF SR – Organisation Environmental Footprint Sectoral Rules
PA – Public Authorities
PEF – Product Environmental Footprint
PEFCR – Product Environmental Footprint Category Rules
REACH – Registration, Evaluation and Authorisation and Restriction of Chemicals
RERM – Resource Efficiency Road Map
SCP – Sustainable Consumption and Production
SCP/SIP AP – Sustainable Consumption and Production and Sustainable Industrial Policy Action Plan
SME – Small and Medium Enterprises
SRI – Sustainable and Responsible Investment
UCPD – Unfair Commercial Practice Directive
WBCSD – World Business Council for Sustainable Development
WTP – Willingness to Pay

1. INTRODUCTION

There is growing pressure on companies to demonstrate that the way in which they are producing is environmentally friendly, both at the level of individual products and as organisations. Information on environmental performance is used for the management of supply chains, ensuring that businesses are resource efficient. At the same time, it serves to show how "green" a product or an organisation is, because consumers increasingly want to be able to better understand the environmental impacts associated with their consumption.

However, the provision of this information in a transparent and reliable way is complicated by the fact that a wide range of different methodologies for the assessment of the environmental footprint of products and organisations have been developed. These have their own features, rules, and scope, and are applied at national, European and/or international level to differing extents. The fact that there is no single accepted methodology has contributed to a situation where there is distrust (by consumers and by business alike) of environmental claims, both those attached to products and those included in companies environmental reports. In addition, the multiple government and private sector schemes increase costs for businesses, especially penalising those active in several Member States or internationally because the technical requirements differ in each scheme, thus generating hurdles in cross-border operations.

This Impact Assessment report will accompany the adoption by the Commission of a package of measures to contribute to building the Single Market for Green Products. This package is the first part of a two-step process.

In the first phase, the Commission will take the measures emerging out of this report to reduce the ambiguity of what a green product/organisation is and pave the way towards more reliable comparability of the environmental performance of products and organisations.

The Commission will do this by introducing two robust but relatively simple methodologies for assessing the life-cycle environmental performance of products and organisations. The Commission will recommend Member States and the private sector to use them on a voluntary basis for both business to business and business to consumer transactions. The Commission will also collaborate with industry and other relevant stakeholders on the development of performance benchmarks for products and organisations in a range of priority product categories and sectors.

After three years of applying the methodologies on a voluntary basis, the Commission will evaluate progress before deciding on any second phase. As part of this it will assess whether the methodologies, product and sector performance benchmarks, and incentives can be further integrated in a wider range of regulatory instruments and will produce appropriate proposals, as indicated in the Commission proposal for a new EU Environmental Action Programme to 2020¹. Some analysis is provided of this more ambitious perspective already in this Impact Assessment report, but a new impact assessment will accompany any future proposals.

This report demonstrates that providing more reliable information on whether production and consumption is green will be beneficial for companies and households, and the environment.

¹ The 7th EAP. See <http://ec.europa.eu/environment/newprg/index.htm>.

This will allow in the medium term a higher uptake of green products² and of greener practices by companies in the EU market. This would not only contribute to reducing the global environmental impacts of EU consumption but also provide some opportunities for economic growth and job creation. Green products are often based on innovative technologies and are results of advanced production processes and optimised supply chains. Thus, policies that stimulate the uptake of green products can bring important additional economic benefits – they can create new markets, foster innovation, and make companies more competitive and less reliant on scarce and costly resources.

This response also builds on the existing EU sustainable consumption and production policy (SCP), which aims to stimulate consumers' demand for more sustainable goods and production technologies and to improve the environmental performance of products³. After a few years of implementation, the policy has achieved some success, but its shortcomings are also evident. The mid-term evaluation⁴ published in September 2011 confirmed the need to develop common procedures and tools for the calculation of the environmental impacts of products using a life cycle⁵ perspective.

In September 2011, the Commission's Resource Efficiency Roadmap (RERM) recognised that *"changing the consumption patterns of private and public purchasers (the consumption side) will help drive resource efficiency and can also frequently generate direct net cost savings. In turn it can help increase demand for more resource efficient services and products"* (the production and product side). The RERM also stressed that *"the internal market and market based instruments have an important role in setting the framework for markets to reward greener products and greener companies"*. The package of measures emerging out of this report will contribute to that larger agenda.

2. PROCEDURAL ISSUES AND CONSULTATION OF INTERESTED PARTIES

2.1. Inter-Service Group

The Interservice Group for the SCP/SIP Action Plan, co-chaired by DG ENV and DG ENTR also functioned as the Impact Assessment Steering Group of this initiative. The Steering Group has met to-date 5 times in total to discuss the results of the public consultation and various versions of this report. The group includes: DG AGRI, CLIMA, CNECT, COMP, DEVCO, EAC, ECFIN, EEA, ELARG, EMPL, ENER, ENTR, ENV, ESTAT, JRC IPTS, JRC IES, JUST, MARE, MARKT, MOVE, REGIO, RTD, SANCO, SG, SJ, TAXUD, TRADE.

² Green products are those that have less of an impact on the environment or are less detrimental to human health than traditional equivalents. Green products might, for instance, be formed or part-formed from recycled components, be manufactured in a more energy-efficient way, or be supplied to the market with less packaging (or all three).

³ [Sustainable Consumption and Production and Sustainable Industrial Policy \(SCP/SIP\) Action Plan](#). COM/2008/0397 final of 25/6/2008.

⁴ ECORYS, [Mid-term Evaluation of the Sustainable Consumption and Production and Sustainable Industrial Policy Action Plan](#), Final Report, September 2011. See Annex 5.

⁵ The life cycle of a product includes all activities carried out to produce it, thus includes design, resource extraction, production, distribution, use, and end of life. Life cycle impacts cover all potential environmental impacts arising during the life cycle of a product.

2.2. Consultations

2.2.1. Consultation with the EU Member States

Since the beginning of the preparatory process, the Commission has met 5 times with Member States, informing them on the SCP/SIP Action Plan review as well as on the proposal for an initiative on the Single Market for Green Products. The broad majority of Member States have consistently stressed that they see the need for an EU-coordinated approach in this matter.

2.2.2. Public Consultation

The present report was preceded by a public consultation launched on 11 January 2012 via the EUROPA website in order to gather comments and suggestions from stakeholders and citizens concerned. The consultation ran until 3 April 2012. 398 responses to the online consultation and more than 50 position papers were received. A clear indication emerged, urging the Commission to pursue a higher level of synergy and complementarity between EU SCP regulatory instruments and policy measures. A summary of the responses is available in Annex 7 together with the list of the position papers received.

2.2.3. Ad hoc Consultations

Meetings were held internally and externally with key stakeholders, in order to build a vision and identify the right objectives and the necessary tools as early as October 2010.

The methodology for the assessment of the environmental footprint for products and organisations was discussed in detail during a workshop that took place in Brussels on 29-30 November 2011, gathering some 130 key stakeholders⁶. Also stakeholders not attending the meeting were given the possibility to send comments and questions which were then discussed during the meeting.

2.2.4. Expert Studies

The analysis builds on the results of the evaluation study of the 2008 SCP/SIP Action Plan and is further supported by four other studies⁷. The studies provided input to the analysis of problems and of the economic, social, and environmental impacts of the different options considered.

2.3. Impact Assessment Board

The draft IA report and its summary were submitted to the Board on 10 October 2012 and discussed at the Board meeting of 7 November 2012. The Board in its opinion of 9 November 2012 on the draft IA asked for significant improvements to the report, namely to better

⁶ The participants to the meeting acknowledged the importance of the work done by the Commission, highlighting the potential benefits that this initiative could have in the EU but also at international level. Several companies participating invited the Commission to keep the high level of ambition but also to address a number of technical difficulties that the draft Product Environmental Footprint (PEF) and Organisation Environmental Footprint (OEF) methodologies discussed at that time were not addressing in an appropriate way. These comments, together with the outcomes of the pilot test and the public consultation have been taken duly into account when drafting the following versions of both methodologies. The video of the meeting and the slides presented are available at: http://ec.europa.eu/environment/eussd/corporate_footprint.htm

⁷ "Support for the Impact Assessment of the review of the 2008 SCP/SIP Action Plan" conducted by AEA; "Support for the Impact Assessment study of the review of GPP", conducted by AEA; "Support for the Impact Assessment of a new proposal on the measurement of the environmental performance of products", conducted by IVM; and "Support the Impact Assessment of a new proposal on improving the environmental performance of organisations" conducted by AEA.

describe the problem and its underlying causes; to better demonstrate the need for and proportionality of EU action; to provide a clearer intervention logic; to better describe, assess, and compare the policy options and their packaging; and to identify more clearly the resulting impacts.

A resubmitted version of the IA report integrated considerable changes and additional analysis. Additional information and concrete evidence about the key failures has been included, together with an updated baseline scenario, the projected evolution of the methodologies landscape in Europe, and more details on the existing national schemes in Member States. Furthermore, the comparison of the options was made more concrete and comprehensive, while the underlying assumptions have been clearly presented, together with a clearer intervention logic and concretely defined objectives. Also comments received by various stakeholders have been integrated throughout the text as appropriate.

The Board re-examined the new IA report and issued a new opinion on 22 February 2013. Following this opinion, the current version of the IA sets out more concretely the need for action and the value-added of an EU led proposal, explains better what will be the evolution if proliferation of schemes will be continued in EU or at international level, stresses the impacts to business of this proliferation, discusses the mutual recognition of schemes as a possible solution and demonstrates better the need for two environmental footprint methods at EU level. The information about the different options examined in this IA report as well as their comparison has been further elaborated, while appropriate studies and sources have been identified throughout the report.

3. PROBLEM DEFINITION, BASELINE SCENARIO AND SUBSIDIARITY

3.1. Background – Life Cycle Assessment (LCA)⁸ and the methodological context

3.1.1. Methodological landscape and the role of LCA

There are many different methodologies currently used for measuring environmental performance, whether of products or organisations. Typically, methodologies vary between each other, leading to materially different results. Furthermore, due to the flexibility (methodological choices left to the discretion of the user) built into most of the methodologies, even results obtained using the same methodology are usually not comparable.

Methodologies for measuring environmental performance of products and organisations can be grouped into two main categories:

- Measuring environmental performance through direct impacts (i.e. impacts directly attributable to the product/organisation, such as for instance the hazardous waste resulting from production). Within these methodologies, some cover a single environment impact (e.g. Scope 1 of the GHG Protocol⁹, covering greenhouse gases; or the Forest Stewardship Council Certification¹⁰), while others cover several environmental impacts

⁸ A life-cycle assessment (LCA) is a technique to assess environmental impacts associated with all the stages of a product's life from-cradle-to-grave (i.e., from raw material extraction through materials processing, manufacture, distribution, use, repair and maintenance, and disposal or recycling).

⁹ <http://www.ghgprotocol.org/>. Scope 1 refers to direct greenhouse gas (GHG) emissions from sources that are owned or controlled by the company; Scope 2 accounts for GHG emissions from the generation of purchased electricity consumed by the company; Scope 3 covers all other indirect emissions (impacts in the supply chain and during use phase)

¹⁰ <http://ic.fsc.org/>

(e.g. EMAS Key Performance Indicators¹¹; several indicators under the Global Reporting Initiative¹²).

- Measuring environmental performance through direct and indirect impacts (i.e. including impacts in other phases of the life cycle, e.g. extraction, logistics, use, end of life – Life Cycle Assessment). Within these methodologies, some cover a single environmental impact (e.g. analysis based on the GHG Protocol; CDP Water¹³; PAS 2050¹⁴), while others cover several environmental impacts (e.g. Life Cycle Assessment Studies based on ISO 14040-44¹⁵; ILCD¹⁶; the EU Ecolabel¹⁷).

Depending on the goal of carrying out the assessment, all approaches have their value in improving environmental performance. However, in terms of completeness and relevance, carrying out an analysis that encompasses all relevant life cycle phases and all relevant environmental impacts for a product or organisation provides for the most complete analysis and points to targeted improvement opportunities. It also avoids falling into the risk of improving a single environmental indicator while worsening others. For example, in the case of an energy-using product, where only energy use is measured, improvements in energy efficiency might go hand in hand with an increase in the amount of materials needed to produce the appliance – with all the environmental impacts associated to extraction of materials or resource depletion that the producer will not be aware of.

Currently there is only limited coordination internationally regarding methodologies. Examples for coordination initiatives include guidance for the development of product category rules, coordination in the framework of the International Standards Organisation (ISO), and efforts to approximate carbon footprint methodologies through the Carbon Disclosure Standards Board¹⁸. Despite these initiatives, methodologies remain highly variable.

The gap in the existing methodologies based on multi-criteria LCA is that many technical issues are still left open, and several choices are available for calculations. Due to this flexibility, it is currently not possible to compare the performances of two competing products or two companies active in the same sector¹⁹, which is of fundamental importance to allow informed choices for consumers and businesses alike.

3.1.2. How methodologies to assess environmental performance are currently used

Environmental considerations are increasingly mainstreamed and relevant for marketing strategies, managing supply chains, and as an element of consideration for investors. As a result a growing number of companies and public bodies are using different methodologies to

¹¹ See Annex IV of [Regulation \(EC\) No 1221/2009](#) on the voluntary participation by organisations in a EU eco-management and audit scheme (EMAS). Although EMAS suggests taking into consideration both direct and indirect impacts, core indicators focus on direct impacts only. Sector-specific guidance is given regarding indirect impacts in Sector Reference Documents.

¹² <https://www.globalreporting.org/Pages/default.aspx>

¹³ <https://www.cdproject.net/water>

¹⁴ [PAS 2050:2011](#) Specification for the assessment of the life cycle greenhouse gas emissions of goods and services, British Standards Institute

¹⁵ ISO 14044:2006 Environmental management -- Life cycle assessment -- Requirements and guidelines

¹⁶ [International Reference Life Cycle Database Handbook](#), JRC

¹⁷ The preparatory study, which forms the basis for defining the criteria, is based on a LCA approach. www.ecolabel.eu

¹⁸ <http://www.cdsb.net/>

¹⁹ [Analysis of Existing Environmental Footprint Methodologies for Products and Organizations: Recommendations, Rationale, and Alignment](#), JRC 2010.

assess the environmental impact of the products they develop or buy. As shown above, some of these methodologies are LCA-based, while others cover only direct impacts.

Industries are more and more using LCA as a green sourcing tool, which is a way to improve their overall performance along the value chain. Some big industries (e.g. Emerson in the electronic sector or Nike in the apparel one) are already using LCA-based methodologies to identify and select the best performing suppliers, especially with reference to SMEs. In some cases, companies are proactively searching for materials that will contribute to the environmental performance of their products or projects through their entire life cycle.

In the retail sector there is a clear shift towards mandatory sourcing programs. Historically, most retailers worked in voluntary supply chain partnerships with key suppliers to promote and procure more sustainably sourced products, like seafood or paper products. However, almost half of the retailer supply chain programs now evaluate a product's sustainability performance as part of a buying decision, which indicates that sustainability is no longer a voluntary partnership proposition but a growing retailer requirement²⁰. Indeed, retailers with hundreds of billion euro in purchasing power already now consider a product's environmental performance as part of their decisions as to whether put it on sale. Most large retailers have at least one sustainability supply chain program and the world's three largest retailers – Walmart, Carrefour, and Tesco – all have one or more programs in place to source greener consumer goods for their shelves.

Governments also use such information, as a way of practising Green Public Procurement (GPP)²¹. Often also private green procurement is done in line with recommended GPP criteria (e.g. the EU GPP criteria, but also national criteria). These criteria are usually developed by taking into account existing LCAs. Those, however, vary in detail and quality and often, public authorities are only using criteria concentrating on one, or on a small number of specific environmental aspects of the product having a high importance for the public authority. One example is the energy consumption of a product in the use phase due to its financial implications. Aspects related to the production phase of the life cycle are often not tackled in the GPP criteria, due to limited data on these and a lack of means of verification. In the development and revision of EU GPP criteria the current intention is to consider existing LCAs (often those that were conducted for the EU Ecolabel criteria of the same product group) in order to identify those relevant environmental aspects that need to be addressed.

Consumers are targeted with several types of "green" marketing information, including labels and environmental declarations. Many of these are based on some forms of life cycle methodologies, but often are either not done in consistent ways, are not verifiable and/or only focus on a single issue (being it carbon, water, sustainable sourcing, etc.). There is though not a one-to-one relationship between methodologies and labels. Without a specific legislation aiming at avoiding the proliferation of labels, even the existence of a single methodology would not imply *per se* a reduction in the number of environmental labels currently co-existing on the market (more than 400 hundred worldwide²² and this number is rapidly growing). What a common methodology would bring in terms of communication to consumers would be a more level playing field between competitors and more assurance in terms of credibility and verifiability of the information provided.

²⁰ Five Winds International, *Retail: Stocking the shelves with Green*, 2010.

²¹ More than 50% of public authorities in the EU include "some kind of environmental criteria" in the tendering procedures for the ten product groups examined with high environmental relevance. [Monitoring of the uptake of GPP in the EU](#), DG ENV/CEPS, 2012

²² <http://www.ecolabelindex.com/>

Increasingly, investors also want to know that companies they have targeted have responsible, sustainable, long-term business approaches. Market interest in non-financial (e.g., Environmental, Social, and Governance) information is growing. Institutional investors and stock exchanges, for example, request increased sustainability reporting from listed companies, and environmental indices have been established such as the Dow Jones Sustainability Index²³. As an example of such interest, the Carbon Disclosure Project²⁴ was developed in response to investor demand for a system for firms to measure and report greenhouse gas emissions and climate change strategies as a tool to set reduction targets and individual goals. Whilst most of the currently used assessment approaches are not LCA based, there is a growing trend among multi-nationals and big producers to use more and more Life Cycle Management principles in their strategic management.

3.1.3. *On-going methodology development in the Commission*

Against this background, since 2010 the EU's Joint Research Centre has been developing the Product Environmental Footprint (PEF) and Organisation Environmental Footprint (OEF) methods (umbrella methods)²⁵. Both PEF and OEF are LCA-based methodologies to identify and quantify the most relevant environmental impacts of products (good and services alike) or a product and service portfolio (organisation). They build on existing approaches and international standards²⁶, even if using LCA for organisation-level assessment represents a relatively novel approach.

Before considering developing a new methodology, the Commission carried out an in-depth analysis of the most widely applied methodologies^{27, 28}. The objective of this analysis was to assess if the existing methodologies are "good enough" to achieve a number of policy objectives, such as: improvement of resource efficiency along the value chain; definition of environmental performance benchmarking; improvement of design for environment; reproducibility of results; and comparison of environmental performances. The analysis²⁹ indicated that none of the existing methodologies could be used as such, and a need to "fill some methodological gaps".

One important new feature of both methodologies developed by the Commission is that they enable the possibility of comparing the environmental performance of products and organisations. In 2011-12 the two methodologies have been submitted to a road-testing by volunteering companies³⁰. The views of business were generally positive about the approach

²³ <http://www.sustainability-index.com/>

²⁴ <https://www.cdproject.net/en-US/Pages/HomePage.aspx>

²⁵ See Annex 9 for a more complete description of PEF and OEF features. More information about the preparatory work carried out by JRC IES is available at: http://ec.europa.eu/environment/eussd/product_footprint.htm for PEF and http://ec.europa.eu/environment/eussd/corporate_footprint.htm for OEF.

²⁶ [*Analysis of Existing Environmental Footprint Methodologies for Products and Organisations: Recommendations, Rationale, and Alignment*](#), JRC, 2011.

²⁷ For products the methodologies assessed were: ISO 14044 (Environmental management -- Life cycle assessment -- Requirements and guidelines), ISO 14067 (carbon footprint of product), ILCD (International Reference Life Cycle Data System), Ecological footprint, Product and Supply Chain Standards Greenhouse Gas Protocol (WRI/ WBCSD), French Environmental Footprint (BPX 30-323), UK's Product Carbon footprint (PAS 2050), ISO 14025 (Environmental Product Declarations).

²⁸ For organisations the methodologies assessed were: ISO 14064 (Greenhouse gases -- Part 1, 2 and 3), ISO/WD TR 14069 (GHG - Quantification and reporting of GHG emissions for organisations), ILCD (International Reference Life Cycle Data System), Corporate Accounting and Reporting Standards Greenhouse Gas Protocol from WRI/ WBCSD, Bilan Carbon, DEFRA - Carbon Disclosure Project (CDP), CDP water, Global Reporting Initiative (GRI).

²⁹ The full report is available at: <http://ec.europa.eu/environment/eussd/pdf/Deliverable.pdf>

³⁰ The methodologies were tested for 10 products (agriculture, retail, construction, chemicals, ICT, food, manufacturing - footwear, televisions, paper), and 10 organisations (retail, food, energy production, water supply, feed, public sector, ICT, mining, chemicals and paper manufacturing). See Annex 9 for details.

even if there are some improvements needed. In particular, the road-testing showed that the methodologies are well suited to address the complexity of production processes and supply chains, helping to strike a balance between information need and relevance of information. They also allow streamlined environmental reporting and business-to-consumer information. The road testing confirmed that the environmental footprint methodologies are more comprehensive than alternative approaches currently used. While this approach can be practically implemented on real products and organisations, the road test pointed out that the full-scale implementability of such an approach will require further work, especially regarding data availability and development of tailored requirements for product groups and sectors.

The PEF and OEF methodologies are now mature enough to be used for tracking the environmental performance of a product and an organisation through time, or to provide information for product or process optimisation. Further developments are however necessary to reach the full potential of both methodologies. These include the development of product group-specific Product Environmental Footprint Category Rules (PEFCRs) and sector-specific Organisation Environmental Footprint Sector Rules (OEFSRs)³¹ for priority product groups and sectors including benchmarks; improved availability of good quality life cycle data; setting-up a verification system which is cost-effective; and normalisation and weighting system. The Communication originating from this impact assessment will explain how to move from the first phase of road-testing to a more widespread piloting and development phase of the methodologies that would result in increasing the user-friendliness of PEF and OEF.

3.2. Problem definition

3.2.1. *The underlying issue: the proliferation of methodologies is hampering the functioning of the market of green products*

Many methodologies are available and used to assess and communicate the environmental footprints of products and organisations³². Their number is **rapidly increasing** leading to a **proliferation** of national³³ and private sector initiatives³⁴. Companies are in principle free to choose which one to apply, but are also often required to use a particular one either by a national administration or by clients downstream in the supply chain. If a firm supplies several other firms, then it may be asked to supply environmental information in multiple ways implying the use of multiple methodologies. At the same time, there is no natural coalescence around a single specific methodology.

A good illustration of this underlying driver is the wave of methodological developments leading to a continuous appearance of new – similar but slightly different – LCA-based

³¹ Product Environmental Footprint Category Rules are a set of tailored methodological specifications and instructions to be applied for a specific product group. Organisation Environmental Footprint Sectoral Rules are a set of tailored methodological specifications and instructions to be applied for a specific sector. See Annex 9

³² See a list of the most important (diverging) initiatives on the assessment of the environmental footprint of product and organisations in Annexes 17, 18 and 19.

³³ E.g. France is currently evaluating a pilot programme on product environmental labelling. Since 2008, private companies have been invited to participate in the programme to demonstrate and test concrete example of multi-criteria environmental labelling . A preliminary evaluation of agri-food products show that 75% of the companies involved in the pilot programme intend to continue with environmental labelling and about 64% are in favour of a EU harmonised approach. (<http://www.developpement-durable.gouv.fr/IMG/pdf/LPS125.pdf>) Other initiatives exist in the UK, Switzerland, internationally in Japan, Australia and Canada. See Annex 19 for more details

³⁴ E.g. the Sustainability Consortium, Envifood Protocol, GHG Product Protocol, different labels and standards (carbon footprint, LCA, water footprint); Carbon Disclosure Project, sustainability indices, Global Reporting Initiative, etc. See Annexes 18 and 19 for more details.

methodologies, both in Europe and internationally. For example, if today a company would like to make a product carbon footprint study, it might choose among a long list of methodologies, such as the following: PAS 2050 , BP X30-323, ISO 14040-44, ISO 14025, ISO 14067 (once the standard will be adopted), WRI GHG Protocol, and many more³⁵. For analysis at company level, 80 leading methodologies and initiatives were identified according to which GHG reporting could be carried out³⁶. However, even looking at the same product or organisation, these methodologies would deliver different results, because they are based on different models and use different methodological assumptions. As explained in the following paragraphs this “diversity” represents a serious problem both for those who commit the studies (usually industries) and for the users of the results (other companies along the value chain, consumers, investors, procurers, policy makers, insurers or any other stakeholder interested in the results of such studies). ***The ensuing confusion is an obstacle to the take-up of more resource efficient products both by consumers and businesses, and leads to missed opportunities*** (see section 3.2.2).

Indeed, there are ***numerous voices from industry calling for a harmonisation of methods*** to assess the environmental performance of products in order to ***create a level playing field, reduce costs, and prevent free riding***. Respondents to the public consultation considered the lack of consistency as one of the most important barriers to the display and benchmarking environmental performance (72.5% agreement), alongside lack of time or expertise (76.4%), and insufficient market reward for good environmental performance (70%). When asked about the drivers of the barriers, multiple initiatives in the EU (70.8%) and multiple ways of reporting (76.3%) received high agreement from stakeholders.

Regarding the consumer angle, 89% of citizens responding declared that they prefer buying products that have a lower environmental impact; and the same percentage declare that it is important to know the environmental impact of what they buy. Thus, the need for reliable information for consumers is re-confirmed.

3.2.2. The scope and scale of the problem

The proliferation of methodologies leads to a number of related problems: additional costs for business; reduced opportunities cross border trading of green products; lack of clarity for consumer choices; and missed opportunities for resource efficiency.

The analysis provided in this report tends to focus on the EU context, but markets and supply chains are globalised, therefore most of the problems highlighted in this chapter are common to companies and consumers also outside the EU.

a) Additional costs for businesses

The co-existence of different methodologies implies a direct increase of costs for those who want to assess and communicate the environmental footprints of their products or organisations. The increase of costs is due to: (1) increase in training costs to be able to cope with the requirements of the different methodologies; (2) increase in costs related to gathering of different information; (3) different labelling requirements; (4) different verification requirements. Information needs are multiplied not only with reference to data under the direct responsibility of the company interested in calculating the environmental performance

³⁵ A detailed comparative analysis of the most relevant methodologies currently used has been carried out by JRC IES and is available at: <http://ec.europa.eu/environment/eussd/pdf/Deliverable.pdf>

³⁶ [Company GHG emissions reporting - a study on methods and initiatives](#) (2010)

of their product, but also (sometimes mainly) with reference to the information needed from their suppliers. Indeed suppliers are more and more faced with requests coming from their customers asking for the same information (e.g. their carbon footprint) but to be calculated in different ways or different information altogether (for the same product some customers may ask their supply chain for carbon footprint alone, while other may ask information on carbon footprint plus lifetime emission to air, or material consumption, etc.). Costs stemming from duplication of efforts are particularly felt in sectors where most impacts stem from the supply chain. For example, PUMA has stated that 94% of the environmental impacts of its products occur along the supply chain³⁷.

Concrete examples of how the current situation generates additional cost to business include:

- A leading company in the electronics sector has requested a single LCA methodology to be used by all its more than 20,000 suppliers. Those suppliers generally have other clients, which require providing similar information, but based on a different methodology. Reporting the same data in different formats clearly represents a cost for these suppliers – a cost that could be avoided if a single methodology would be applied in the Single Market and would be increasingly accepted internationally.
- Many international companies are part of several sustainability indices (e.g. Dow Jones Sustainability Index, Stoxx Global ESG Leaders, FTSE4Good) and need to reply to several questionnaires on their sustainability performance, all with different contents. These companies have expressed in several occasions that this is an unnecessary cost for them, a cost that could be reduced by having a single reference for measuring the environmental performance.

b) Reduced opportunities for cross border trading of green products

Given the lack of a commonly agreed definition of green products, it is difficult to substantiate the scale of intra-EU and extra-EU trade that is affected by this issue. However, according to a recent Eurobarometer, around 1.2 million SMEs are engaged in intra-EU trade, and 1 million of them in extra-EU trade in green markets³⁸. On the demand side, surveys suggest that 90% of consumers buy green products at least sometimes, of which export products would have a share. Overall, there is clearly considerable trade in green products, and this is likely to be increasing.

However, the proliferation of methodologies may hinder this positive trend, reducing the opportunity of cross border trading of green products. Companies may want to trade across borders, but find that the requirements related to the environmental information for the products they intend to sell change across those borders. Increasingly, different environmental information is requested by national governments in the case of public procurement, reporting or labelling requirements, or by private initiatives, for instance by a retailer to let the product be displayed in stores.

The following scenario could become the normal (but inefficient) way to market green products in Europe: a Spanish company wishing to market its green product in UK, France, Italy, and Switzerland will soon need to apply for several national schemes, even if it is not required to do so in Spain. In France, it will have to carry out an environmental assessment in line with the French official methodology (BP X30-323); in the UK it will have to apply the

³⁷ For a detailed assessment on the importance of indirect impacts, see Annex 16.

³⁸ Flash Eurobarometer 342, [SMEs, resource efficiency and the green markets](#), 2012.

PAS 2050 or the WRI GHG Protocol; in Switzerland, it will have to comply with the Swiss approach (currently under development); in Italy it will be asked to join the governmentally recognised Italian scheme, and will have to carry out yet another analysis. The same Spanish company may also be asked to develop an Environmental Product Declaration (EPD) based on ISO 14025, to find out after some months that that is not enough, because there are different competing EPD systems around the world and, even if they are all based on ISO 14025, each have its own specificities so that in the end results are again not comparable and therefore more difficult to communicate. Assuming a €4,000 – 10,000 cost for a study³⁹, the company will have to multiply this cost for each market it intends to enter.

In this scenario, the Spanish company would incur a cost of up to €20,000 – 50,000 per product to be able to compete based on environmental performance in 5 European markets. In practice, this is an upper estimate: costs would be lower as some data could be reused so it is not 100% additional requirements each time. On the other hand, this cost estimate does not include the costs for the verification of the information which could be different for each scheme.

According to EU Law, Members States enjoy a high degree of flexibility in the preparation, adoption and application of their national technical regulations, such as for instance a scheme to calculate and communicate environmental performance. However, the regulatory flexibility is limited by the requirement that technical regulations are not prepared, adopted or applied with a view to, or with the effect of, creating unnecessary obstacles to trade. Unnecessary obstacles to trade make it more difficult for companies to compete across European borders, due to the following reasons:

- Loss of economies of scale: if a firm must adjust its production facilities to comply with diverse technical requirements in individual markets, production costs per unit are likely to increase. This imposes a handicap particularly on SMEs.
- Conformity assessment procedures: compliance with technical regulations generally needs to be demonstrated. This may be done through testing, certification or inspection by laboratories or certification bodies. If this needs to be done in a different way in each individual market a company may be discouraged to enter, thus losing business opportunities.
- Information and adjustment costs: these costs have been analysed in the previous paragraph. Looking at it through the level playing field lens, it is important to stress here that exporters are normally at a disadvantage vis-à-vis domestic firms, in terms of adjustments costs, if confronted with new regulations.

c) Lack of clarity for consumer choices

When buying a product, the most important aspects for consumers are quality (67% thinks it is very important) and price (47%), followed by the product's impact on the environment (34%)⁴⁰. This is normal consumer behaviour: people place value on different attributes of a product. However, consumers have very poor information on what is genuinely 'green'. Without providing this information in a trusted way, purchasing decisions are distorted and many consumers end up not buying green products despite their declared intention to do so. This has been shown by a Eurobarometer survey: while 75% respondents of the poll say they

³⁹ See Annex 10 for a more detailed assessment of costs.

⁴⁰ Eurobarometer *Europeans' attitudes towards the issue of sustainable consumption and production*, 2009

are ready to buy environmentally friendly products, only 17% had actually done so in the month before the survey⁴¹. The reasons for this vary, but include both a lack of trust on the environmental information provided by producers or/and retailers⁴² and the limited offer of green products.

Currently, the environmental performances of products are not communicated in a way that is comparable and thus limit the ability to make informed choices. At the same time, the number of green claims is growing⁴³, even if they are becoming more superficial and vague in their use of terminology. This further deteriorates consumer trust: 39% of consumers say business claims about the environment are not accurate⁴⁴. People tend to distrust green claims, both those attached to products and those included in companies' Corporate Social Responsibility (CSR) or other environmental reports⁴⁵. This situation penalises those companies who have been investing a lot in improving their performances and greening their business models. The perception is that companies are competing on the basis of their claims rather than on the basis of the underlying environmental performance.

d) Missed opportunities for resource efficiency

While many companies have traditionally focused on their internal operations for cost reduction initiatives, this alone may not address the significant savings opportunities for a company along its upstream and downstream supply chain⁴⁶. By tackling this situation head on, companies can reduce their costs (see Box 1 below). The more proactive companies have understood the large margins for further efficiency gains along their supply chain and in order to exploit that they are more and more using life cycle management approaches⁴⁷. Those who are using life cycle approaches to improve their resource efficiency can also enjoy other benefits, like a better return on investment, develop new markets, improved corporate image, better customer loyalty, a better understanding of the risks across their full supply chain, and better product differentiation.

More green products being sold on the market and more organisations getting greener would contribute to achieving the objectives of the Resource Efficiency flagship and the EU 2020 Strategy. Although environmental reporting *per se* does not mean performance improvement, many of the companies measuring performance set up targets and actions. For instance, out of 405 corporations responding to the Climate Disclosure Project, 82% set and disclose reduction targets. Most of the reductions reported are a result of emissions reduction activities (40%)⁴⁸.

⁴¹ Eurobarometer *Attitudes of European citizens towards the environment*, 2008.

⁴² A survey conducted by OECD on 10.000 households shows that prices and trusted information are important factors to move consumers towards more environmentally friendly purchasing decisions. OECD (2011), *Greening Household Behaviour: the Role of Public Policy*.

⁴³ The [Flash Eurobarometer 332](#) of 2012 showed that 1/3 of EU consumers encountered misleading information about the environmental impacts of a product. See Annex 3.1 for more evidence.

⁴⁴ 2011 GfK Green Gauge Report. See also Annex 3.

⁴⁵ The second Eurobarometer survey on the [Attitudes of European citizens towards environment \(2011\)](#) showed a decline of respondents thinking that labels on products allow the identification of those environmentally friendly (47% compared to 52%, scored in 2008). In addition, a the [Flash Eurobarometer 256](#) on *Europeans' attitude towards SCP* (2009) showed that only 6% of EU citizens said they completely trust producers' claims about their products' environmental performance, while twice as many respondents (13%) answered that they do not trust such claims at all.

⁴⁶ Deloitte 2011, Deloitte: The High Profit Supply Chain – A Resource Focused Approach.

⁴⁷ For a list of studies supporting this statement, please consult Annex 21.

⁴⁸ [Business Resilience in an uncertain, resource-constrained world](#), CDP Global 500 Climate Change Report 2012

Box 1 – Examples for the potential of green solutions to save costs - Life Cycle Approaches in progressive companies

Life Cycle Approaches have been used for years in many companies, first as performance tracking tools for internal uses only, then as an integral part of high-level decision making. Companies using them have considerably improved their resource efficiency (and reduced production costs), spurred innovation by improving the environmental features of products, raised stakeholders' awareness, gained new markets, and optimised their product lines by eliminating products with poor environmental performance. Below some exemplary cases:

Xerox saves hundreds of millions of US\$ each year through its remanufacturing and recycling programs. Easy disassembly, durability, reuse, and recycling are incorporated into product design, so that parts of almost all old machines can be refurbished and reused in new ones⁴⁹. For example, in 2009 US\$ 400 million (85% of its net income) were saved by designing for and using remanufactured parts, thus eliminating 42% of its production lines and 42% of carbon from equipment production⁵⁰.

Wal-mart is increasingly integrating sustainability into its strategic thinking. For instance, it plans to reduce packaging by 5% by 2013, with an expected net saving of US\$ 3.4 billion. If Wall-Mart extended packaging reductions to its entire supply chain, a saving of US\$ 11 billion could be achieved. Moreover, some suppliers saved up to 71% of their energy bills by implementing the Wall-Mart environmental footprint approach. Wall-Mart's also states that through implementation of LCA results, detergents producers in US saved over 1.8 Mm³ of water, 43000 tons of plastics, 57000 tons of cardboard, and several millions of US\$ in transportation costs over 3 years⁵¹.

Bloomberg began looking at sustainability as a business issue 5 years ago, by integrating sustainability information into business decision-making for its clients. In the past 3 years has initiated over 300 sustainability projects in 24 countries. It has avoided about 83000 metric tons of CO_{2-eq} since 2008, the equivalent of emissions from burning 410 railcars of coal. Considering that every US\$1 spent on sustainability saves US\$2 in operating costs Bloomberg's sustainability efforts have resulted in over US\$25 million in net savings since 2008⁵².

By implementing Life Cycle Management principles, **3M** has saved over 1.2 billion US\$ over 30 years. In 2007, for example, 3M had a total of 438 environmental projects running, reporting a total of 51 million kg of pollution prevented, as well as a reduction of 2.5 million tons of CO_{2-eq} greenhouse gases⁵³.

Philips uses Life Cycle Assessment as an eco-innovation tool to develop their green products. From 2007 to 2010 they increased their sales of green products of about 50% (from 20% to 38% of total sales). During the same period they reduced the carbon footprint of their products by about 18%⁵⁴.

Unilever is actively using Life Cycle based tools to measure greenhouse gases emissions, waste production, embedded water and water use for about 1600 food, home, and personal care products sold in 14 countries⁵⁵. According to Unilever, implementing life cycle tools is key to stay competitive: consumers expect it, retailers require it, it fuels innovation, it helps developing new markets, and it saves money⁵⁶.

The examples above illustrate the significant cost (and resource) saving potential that can be realised with the application of Life Cycle management and Assessment. In the absence of a wide-scale application of similar tools, only forerunners can benefit from these opportunities.

The incentive to develop new green technologies is negatively affected by the fact that consumers or public administrations do not buy green products as much as they would if they

⁴⁹ Forstater and Raynard (2002), Corporate Social Responsibility; Implications for SMEs in Developing Countries, UNIDO, Vienna. Available at <http://www.unido.org/userfiles/BethkeK/csr.pdf>

⁵⁰ http://www3.weforum.org/docs/IP/CO/WEF_CO_ScalingSustainableConsumptionResourceEfficiency_Report_2012.pdf.

⁵¹ Wal-Mart (2011) Sustainability Report.

⁵² See http://cdn.gotraffic.net/career_videos/Bloomberg-GRI.pdf.

⁵³ Life Cycle Management: How business uses it to decrease footprint, create opportunities and make value chains more sustainable", UNEP/SETAC 2009.

⁵⁴ Philips was recognized as a leader in carbon disclosure and carbon performance by the Carbon Disclosure Project (CDP) 2010 Global 500 report. The CDP collects emissions data from over 3,000 organisations in 60 countries. Philips received a score of 94 (out of 100) for carbon disclosure results and was awarded an 'A' for its overall carbon performance, making it a company with "both higher degrees of maturity in their climate change initiatives and achievement of their objectives" according to the CDP. See http://www.annualreport2010.philips.com/content_ar-2010/proofpoints/improve_footprint.asp.

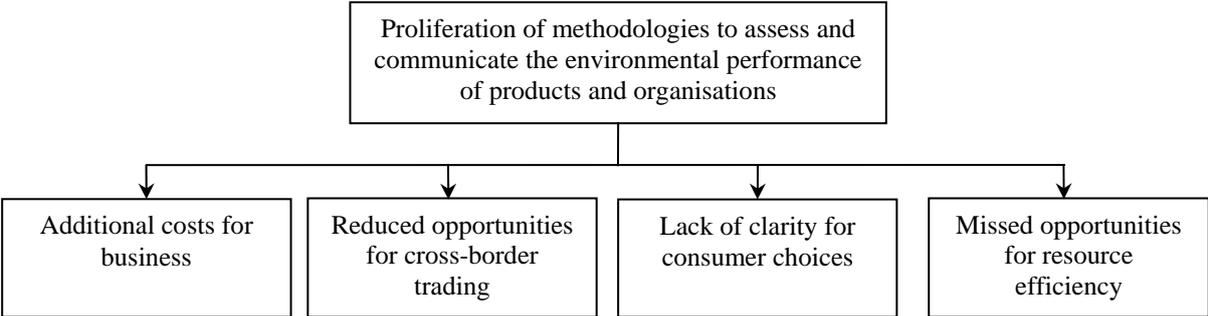
⁵⁵ <http://www.unilever.com/sustainable-living>.

⁵⁶ [Greening the Economy through life cycle thinking](#), UNEP 2012.

had full information available, and that investors are therefore not freeing funds for environmental investments to the full potential or are not considering adequately environmental risks. This reduction in potential market share together with the need for an upfront investment to deploy green solutions in an organisation tends to discourage the management (especially in SMEs) from making the organisation greener. The low take up of green products has repercussions on the take-up of eco-innovation as well.

Innovation in the area of clean technologies is very uneven across the EU and European companies feel the pressure of the increased global competition⁵⁷. This puts at risk the competitive edge of EU eco-industries, which are still leading globally and are growing. Indeed, green technologies have been identified as a possible source of growth in the Industrial Policy Update⁵⁸. In 2010, the global market for eco-industries was estimated at roughly 1.15 trillion euro a year but it is expected to reach around 2 trillion euro a year by 2020.⁵⁹ The EU has a strong export position vis-à-vis nearly all of the world's largest economies. EU companies' share in the world's eco-industry market is significant (30% of water management, 35% of sustainable mobility, 40% of green power generation, 50% of waste management and recycling, 10% of material and resource efficiency⁶⁰); and EU SMEs are participating actively in the internationalisation of green markets.

PROBLEM TREE



3.3. How will the problem evolve? (Baseline scenario)

The baseline scenario is linked to the on-going implementation of the existing policy instruments introduced or strengthened by the SCP/SIP Action Plan. The Action Plan follows a tripartite structure, with the different policy instruments addressing respectively production (i.e. EMAS), products (i.e. Ecodesign, Energy label, the EU Ecolabel, Energy Star, and GPP) and consumption (i.e. Retail Forum).

The time horizon of our baseline analysis is from 2011 (latest data available) to 2015. At that time, it is foreseen that some key SCP policy instruments will be reviewed (i.e. Ecodesign,

⁵⁷ Denmark, Sweden and Finland score among the highest globally in clean technologies but so do important competitors such as the US. China and India are already scoring higher than the Netherlands, Austria, Belgium, France and Spain. See [Global Cleantech Innovation Index](#) 2012 report, CleanTech Group and WWF.
⁵⁸ COM(2012) 582 final, [A Stronger European Industry for Growth and Economic Recovery - Industrial Policy Communication Update](#)
⁵⁹ [The number of jobs depending on the Environment and Resource Efficiency](#), DG ENV/Ecorys 2012
⁶⁰ Roland Berger, 'Innovative environmental growth markets from a company perspective', 2007.

Energy Labelling, EU Ecolabel, and EMAS). The potential changes to these instruments are not considered in the baseline below.

3.3.1. Proliferation of methodologies

Developments at EU level

It is expected that the Commission will propose an initiative on disclosure of non-financial information, by strengthening the existing obligation under the Accounting Directives. The initiative aims at increasing the quantity and quality of social, environmental, and governance information disclosed by large companies and groups. However, it will not propose a detailed methodology for reporting this information, nor specify what elements of environmental performance need to be reported on. Without further intervention on these aspects, the reliability, comparability, relevance, and completeness of the environmental information would fall short of stakeholders' needs, particularly investors, which are expected to become progressively more sensitive to environmental risks because of increasing resource scarcity and resource prices and an improving understanding of sustainability risks. This is demonstrated by the growing interest in corporate sustainability: in the latest UN Global Compact/Accenture CEO study (2010), 93% of the 766 CEO participants worldwide, declared sustainability as an “important” or “very important” factor for their organizations’ future success. In fact, 81% stated that sustainability issues are now fully embedded into the strategy and operations of their organizations.

Although appetite for information would continue to increase, the lack of standardised, reliable information will impede big leaps in considering resource/environment risks systematically. ***Without further EU intervention, claims and reports would continue to vary in ambition*** (i.e. quality of information and scope) ***and would not allow any sort of comparison or benchmarking***. For example, a recent report found that 94 companies used 585 different indicators in environmental reports. Of the indicators disclosed, 22% were used by more than 3 corporations; 55% were used only once; 16% were used twice; and 7% were used three times⁶¹.

The number of methods and initiatives is expected to increase. Only in the area of carbon measurement, studies carried out by the Commission identified 62 leading initiatives and methods on product carbon footprinting and 80 on carbon reporting (status in 2010)⁶². Taking into account these numbers, and considering the increasing interest of private initiatives and policymakers, we estimate that in the next 5 years 5-10 new initiatives would appear. Without further EU intervention prioritising methodological approximation and the reduction of the proliferation in methods, it is likely that these new methods will continue to vary, develop independently, and render the footprinting landscape even more complex.

As regards the lack of clarity for consumers, although there is no EU legislation specifically harmonising green claims and marketing, the EU has regulated the use of claims either directly by including norms in specific legislation regulating different types of performance for products, or indirectly by setting general rules for preventing misleading claims, leaving to national market or competition authorities the task to interpret and enforce them⁶³. In the

⁶¹ *An analysis of indicators disclosed in corporate sustainability reports*, Laurence Clement Roca and Cory Searcy, 2012, Journal of Cleaner Production

⁶² *Product Carbon Footprinting – a study on methodologies and initiatives*, (2010); *Company GHG emissions reporting - a study on methods and initiatives* (2010)

⁶³ This has been done, for example, with Regulation (EC) 834/2007 on organic products, Directive 2010/30/EU on labelling for energy-related products, Directive 1999/94/EC on information of fuel consumption, and Directive 2003/54/EC on common rules for the electricity market. These laws provide for specific rules which take precedence over the broader provisions of the

context of the implementation of the Unfair Commercial Practice Directive (UCPD), the Commission has issued a specific guidance to promote the use of clear, accurate and relevant environmental claims in marketing and advertising⁶⁴. It is expected that the Commission will support an adequate and uniform enforcement in Member States and further elaborate on the UCPD guidance by improving the definitions of green products, green production, and green organisation; by complementing it with more examples/cases of misleading green claims emerging from national jurisprudence; and by recommending best practices based on a life cycle approach and adequate methodologies.

However, the lack of a reliable method that consumers trust would remain unsolved. Given the expected persistence of the proliferation of methods and initiatives, and the persevering incomparability of information, consumers will continue to face increasing and confusing flow of environmental information. Ultimately, this will lead the consumers to further lose confidence in environmental labels and claims.

Developments at Member States level

Without additional EU intervention, the current tendency of governments to issue policies regarding environmental performance information is expected to continue and reinforce. France will consolidate its approach for environmental labelling and reporting under the Grenelle II⁶⁵; the UK set up a Product Sustainability Forum and is about to introduce mandatory GHG reporting for listed companies, and further initiatives might gradually appear on the medium-long term; Italy recently started a pilot project on products carbon footprinting. ***Several Member States have developed or are developing national guidance on environmental claims (UK, France, Ireland, and Denmark) and this tends to become the rule.*** These initiatives are expected to have diverging objectives and scope and (slightly) different methods on which they rely upon. Given the Commission efforts to set up coordination between Member States on this issue, some degree of convergence is expected, but it will take time and will lead to additional costs.

Development at international level (governments-driven)

Internationally, the situation is similar to what is happening at Member States level: Switzerland will present in 2013 a legislation introducing multi-criteria life cycle assessment for products and its communication to consumers. Japan, Korea, Australia, and Canada are also using LCA approaches in policy making. For example, the Ministry for Economic Development, Innovation and Exportation in Quebec is investing \$24 million in a pilot programme to set up a Carbon Footprinting Scheme. The US Federal Trade Commission has just updated and published new "Green Guides" to help marketers in making non-deceptive green claims and US EPA is developing a guidance document on how to develop Product Category Rules. At global level, the International Chamber of Commerce (ICC) has published in 2011 a Framework for Responsible Environmental Marketing Communications.

Private sector initiatives

As environmental performance is increasingly perceived as a competitiveness factor, leading private sector initiatives will continue their activities and new initiatives will appear. For example, the Sustainability Consortium is one of the biggest recent initiatives related to

Directive 2005/29/EC on unfair commercial practices (UCPD), which covers misleading green claims in general and Directive 2006/114/EC on misleading and comparative advertising.

⁶⁴ Guidelines for the Assessment of Environmental Claims, see http://ec.europa.eu/consumers/cons_safe/news/green/guidelines_en.pdf.

⁶⁵ <http://www.legrenelle-environnement.fr/-Loi-Grenelle-2-.html>

products⁶⁶; the Carbon Disclosure Project recently introduced new initiatives related to other environmental aspects such as water and supply chain management; single-impact initiatives such as Water Footprint, or single resource-related initiatives (e.g. forests, green energy labelling), and initiatives focussed on a single sector (e.g. AISE Charter for Sustainable Cleaning, the Higg Index developed by the Sustainable Apparel Coalition, BIO Hotels, the CANSO Environmental Voluntary Code of Practice for Air Navigation Service Providers) will continue to appear⁶⁷. Investors will also increasingly require sustainability data through different individual questionnaires for the purposes of setting up or maintaining sustainability indices, something that big retailers like Wal-Mart and Carrefour are already doing. Their interest is growing: e.g. the investors' base behind the Carbon Disclosure Project grew from 35 investors with assets of 4.5 trillion USD in 2003 to 655 investors with assets of 78 trillion USD. Already in 2001, the OECD identified 145 codes of conduct concerning entirely or partially environmental stewardship, of which 38% contained commitments for environmentally friendly products and services, and 33% addressed the provision of information so as to heighten community or consumer awareness⁶⁸.

All the initiatives listed above are taking place independently. It can be expected that some sporadic methodological approximation at EU and international level will still take place (especially in the area of GHGs, e.g. through the Climate Disclosure Standards Board). However, *these developments would not solve the lack of harmonization*: they would not stop the current proliferation of inconsistent and non-comparable labels and initiatives that inform (and/or further confuse) consumers and other market actors on the environmental performance of products and organisations. Furthermore, looking at existing and new standards, most of them do not allow for direct comparability of results within a product group or sector, and, without EU intervention, are not expected to do so in the future either.

The Commission has already initiated consultation processes with relevant public and private international partners in order to promote a continuous dialogue and build on best practices.

3.3.2. *The inapplicability of the principle of mutual recognition*

In areas not subject to Community harmonisation legislation (such as the assessment, calculation, and communication of the environmental performance of products) the principle of mutual recognition is in general the most established means of ensuring the free movement of goods within the internal market. Mutual recognition derives from the case-law of the Court of Justice of the European Union, and prescribes that a product lawfully marketed in one Member State should be allowed to be marketed in any other Member State, even when the product does not fully comply with the technical rules of the Member State of destination. The principle of mutual recognition without harmonisation of methodologies is a pragmatic and powerful tool for economic integration, however, it does not seem to be applicable in this context for the following reasons:

- As explained above, the methodologies applied in certain Member States to calculate and communicate the environmental performance of products have different scope and ambition, specific and different rules in terms of criteria development and verification procedures, etc. As a result, there is no possible equivalence between them, thus undermining the very essence of the mutual recognition principle, which can work

⁶⁶ <http://www.sustainabilityconsortium.org/>

⁶⁷ See more detailed examples of schemes in annexes 18 and 19.

⁶⁸ <http://www.oecd.org/industry/internationalinvestment/corporateresponsibility/1922656.pdf>

only on the basis of a recognition of substantial equivalence between the relevant national norms. To provide an example, it will not be possible to grant green credentials to a UK t-shirt in France just because it is "carbon neutral" (enough for the country of origin rules) when the French authority will probably require the compliance with the standard BP X30-323 asking to communicate the environmental performance at least for three indicators (e.g. climate change, water, and resources).

- At present, only few Member States are applying methodologies to calculate and communicate the environmental performance of products, therefore the mutual recognition principle would not be of any help for producers originating from Member States without any methodology and conformity-assessment body. This means that they would be obliged either to face additional costs to adapt their green products to the technical rules of other Member States or refrain from marketing them in those Member States as green products.
- Private initiatives are outside the scope of mutual recognition. In order to be able to compete based on environmental performance, companies are *de facto* obliged to join different private initiatives on different markets, based on different methodologies.
- Mutual recognition is a powerful instrument to enhance the free movement of goods; however it is also a controversial one because -contrary to harmonisation- it may lead to the competition between national regulatory systems, compared to the uniform application of a single rule/methodology. This competition may generate sub-optimal results, because a producer could "shop" for the least scientifically robust methodology in a Member State and through mutual recognition gain "green credentials" across the Single Market for its product, thus gaining an unfair competitive advantage compared to producers applying more rigorous and complete methodologies. This would also further aggravate the risk of misleading consumers on what constitutes a genuine green product.
- Mutual recognition will not solve the issue of the homogenous communication of quantified environmental performance of products, which is a crucial element for their comparability. The success of the energy label for white goods can explain the terms of the problem: a single method for the visualisation of the energy efficiency classes across the EU has made it possible for consumers to get familiar with just one scaling system, thus increasing its recognisability and popularity. At the same time, it has simplified EU-wide compliance for producers. The mutual recognition of different national methods to communicate the quantified environmental performance of products will further augment the diversity of environmental labels and the confusion of consumers. In addition, mutual recognition would not remove hurdles to cross border trading: even without legal requirements, exporters will need to use the national communication methods familiar to national consumers in order not to be disadvantaged vis-à-vis local producers.

Mutual recognition at international level is configured differently. It is not a consolidated principle like in EU law, and it normally takes the shape of Mutual Recognition Agreements (MRAs), which are bilateral agreements with key trading partners, such as USA, Japan, Australia, etc. MRAs have the objective of promoting trade in goods between the EU and third countries by facilitating market access and providing easier access to conformity assessment procedures across the whole territory of the parties to all products covered by the agreements. Despite the on-going work on international approximation of methodologies mentioned above, at present there is no indication that under the baseline scenario negotiations will start covering the issue of assessment, calculation, and communication of the

environmental performance of products and organisations in any existing (or foreseen) MRAs.

3.3.3. *Expected effects on environmental and economic performance*

Effects on environmental performance

Without further EU intervention, environmental improvements will be limited by several factors. One is lack of reliable information on the most important improvement opportunities along the life cycle. Although existing voluntary instruments such as EMAS and the EU Ecolabel are driving direct and indirect environmental performance improvement for organisations and products, their effects are limited: only 4500 organisations have EMAS registrations⁶⁹, and the EU Ecolabel is aimed only at best performing products in 28 product categories⁷⁰. Furthermore, under EMAS the measurement of indirect impacts are encouraged, but there is limited guidance on how to do it. The EMAS Sectoral Reference Documents are helpful in this context but they will only become available for a limited number of sectors (11 in total) and reach only enterprises that are improving their impacts in the framework of a management system.

The mandatory Ecodesign and Energy labelling instruments are effective in influencing (respectively) manufacturers/importers and consumers behaviour, but such instruments only cover a limited number of "energy-related products" and so far have concentrated mainly on improving energy performance in the use phase only, thus their effect is limited. In addition, the current legal framework for the Energy labelling does not allow considering life cycle impacts but it only takes account of those emerging during the use phase.

Effects on economic performance

At international level, without EU efforts to trigger more international cooperation and more acceptance of the EU methodological approach, EU companies active internationally will face an increasingly complex (and thus costly) set of requirements regarding measuring and communicating environmental performance. The situation is similar in case of private initiatives: without the impetus of EU action driving convergence, incoherent and uncoordinated initiatives will weaken the effect of reputational advantages and increase costs for companies wishing to compete based on environmental performance.

Thus, without further EU intervention, costs and burdens described in the problem definition that companies face due to the proliferation of methodologies and their difficulties to prove the environmental performance of their products or their company across borders will persist and worsen. Additionally, with the emergence of new approaches and policies in this area, they will face a more complex business environment both within the EU and internationally – but also fiercer competition threatening EU industry's leading positions in green markets.

In a recent survey⁷¹ more than 1/3 of 250 business executives said that they could not keep up with consumer demand for sustainable products and services and 62% declared that sustainable investments were motivated by consumer expectations for green products. The trends to expect due to these realities are more embedding of sustainability in design processes, investing in research and creating a more resource-efficient supply chain – trends that are not expected to set off on time in Europe without EU intervention.

⁶⁹ <http://ec.europa.eu/environment/emas/register/>

⁷⁰ www.ecolabel.eu

⁷¹ *Long-Term Growth, Short-Term Differentiation and Profits from Sustainable Products and Services*, a survey of business executives in the U.K., U.S., Japan, Germany, France, China, Brazil and India, Accenture, 2012.

3.4. Who is affected and how?

Producers are affected by the lack of rewards to invest in green solutions or supply products based on resource efficiency and life cycle considerations, thus having less opportunity to benefit from competitive advantages based on environmental grounds. This affects frontrunners in particular⁷². They are also affected by rapidly increasing burden from different national/private sector schemes. As resources become scarce and prices become increasingly volatile (e.g. rare earth minerals), unprepared and less resilient companies may equally suffer, causing knock-on impacts on the economy.

SME: The SMEs active on green markets (which represent 26% of all SMEs)⁷³ are particularly affected by the confusing array of methods and labels to demonstrate the environmental performance of their products. Also as parts of international supply chains, SMEs are already increasingly requested to provide environmental performance data, based on different sets of indicators. They are equally affected by increasing private and public requirements, within the EU and from third countries, with inconsistencies, for environmental information and/or to be accepted as suppliers.

Companies and other organisations in general have limited information on which to benchmark their environmental performance, for making meaningful decisions relating to supply chain risks, market opportunities, and internal investment priorities.

Investors, financial institutions and intermediaries are impacted by the lack of clear, reliable and comparable information on the environmental performance of organisations, potentially leading to inefficient allocation of capital. The limited capacity to take material environmental risks into consideration also has potential important impacts on their profitability.

Public authorities are affected by a lack of reliable information on the environmental performance of products, and also by the occasional absence of adequate guidance on how to incorporate environmental considerations into public procurement procedures. EU GPP criteria and guidance can partially, but not fully, bridge this gap.

Policymakers/Member States may be disadvantaged by having insufficient information on the direct and indirect environmental impacts of products available and organisations operating in their country, which is impeding them to define environmental policies and support measures more effectively. At the same time they are under growing pressure from progressive business and environmental NGOs to develop environmental information schemes, often having to duplicate efforts for data and methodology provision.

Consumers often get confused by the quantity and diversity of environmental claims/labels, and by too many “green” corporate communications. This concerns especially the 66% of consumers that sometimes buy green products and the 8% that systematically buys them⁷⁴. Consumers also suffer from the absence of adequate guidance on how to incorporate

⁷² According to the 2012 WBCSD report [Changing Pace](#): "In the current financial context, greener technologies and sustainable, inclusive business solutions are at a disadvantage when tested for short term returns. Their business case will not happen at scale and speed unless governments introduce measures to lower their barriers of entry and raise the costs, or remove the license to operate stranded assets and harmful practices. Markets are merely man made. Changing Pace is about innovating better rules for markets, and overcoming mindsets and dilemmas about shared authority and leadership. Governments and business must pull vigorously in unison to boost sustainable business solutions with smart policy solutions". To overcome this baseline scenario the WBCSD report includes the "Green Growth Policy Accelerator" which among others includes: "Norms, standards, and codes of conduct scale up proven solutions with a low set-up cost for governments who want to rapidly close the gap with their goals. Frontrunners, who have developed and pioneered the solutions, are rewarded with lower barriers of entry and risks. International compatibility must be developed to facilitate trade. Compliance must be supported by verification and the capacity to deal with laggards and infringers".

⁷³ Flash Eurobarometer 342, [SMEs, resource efficiency and the green markets](#), 2012

⁷⁴ <http://economists-pick-research.hktdc.com/business-news/article/Economic-Forum/Green-trends-in-the-EU-and-business-implications/ef/en/1/1X000000/1X074E5P.htm>

environmental considerations into their purchasing decisions even though it has been clearly proved in different Eurobarometer surveys that environmental considerations are important for EU citizens. Last, but not least, consumers suffer from the lack of availability of affordable green products, which is the consequence of unexploited economies of scale and efficiency.

3.5. Subsidiarity, necessity and EU value added

As described above Member States have recently started to introduce their own national requirements to sort out problems they face in their national markets. Furthermore, business players are moving actively to the development of methodologies and schemes. The situation is similar internationally, with the appearance of new initiatives related to Life Cycle Assessment (e.g. Sustainability Consortium, the Japanese Ecoleaf, eco-label schemes in Japan, South Korea, China, Taiwan, Thailand, Singapore and Chile⁷⁵).

The proliferation of methodologies, the related difficulties and the increased costs described in section 3.2.2 calls for co-ordinated EU action, as they directly affect the smooth functioning of the Single Market. ***If the EU chooses to intervene at a later stage, companies will have had to comply with several methodologies already, bearing the cost of compliance; national administrations will have had to build their policy implementation structures – costs that could have been foregone through earlier EU action.*** Thus action at EU level is justified and the time is now.

Member States create their own schemes to resolve problems in national markets, to the detriment of the Single Market functionality. The development of methodologies and data at Member States level risks resulting in inefficiency, additional costs, and potential inconsistencies. These developments would also not provide investors and financiers holding portfolios across EU the necessary information to judge whether a company's strategy adequately takes into account the risks and challenges associated with their environmental impacts, or if production is sustainable.

Furthermore, companies trading across borders also face requirements in international markets, and it is not efficient for Member States to pursue international harmonisation on a bilateral basis.

Realising the limitations resulting from a no co-ordinated approach and from a lack of a common methodology, the Member States -in the framework of the Council- have repeatedly requested the Commission to intervene on the proliferation of methodologies in this area⁷⁶.

Businesses perceive the request for environmental performance information from their stakeholders and consumers. Accordingly, they set up their own schemes to meet this demand. This behaviour contributed to the proliferation of methodologies and initiatives on the market presented in the problem definition. Although businesses feel the need for harmonisation, their power to effect this is limited, and will certainly not lead to a level of harmonisation that allows the comparability of environmental performance⁷⁷.

Responding to the public consultation, the majority of stakeholders confirmed that there is a problem with multiple initiatives, methodologies and multiple ways of reporting the results. Taken together, 76% of all those who responded to this question were in agreement or strong agreement. Private companies and industry were the strongest advocates of this problem.

⁷⁵ PCF World Forum News (2010) International Developments in Product Carbon Footprinting and Carbon Labelling

⁷⁶ Council Conclusions on the [Sustainable Production and Consumption Action Plan](#) 4 December 2008, Council Conclusions on [Sustainable materials management and sustainable production and consumption](#), December 2010.

⁷⁷ See a more detailed description in section 3.3 (How will the problem evolve?)

Recognising that the EU is best placed to resolve this problem, many companies and associations are asking the Commission to take action on this. In 2010 AIM, the European Brands Association grouping 1800 companies of all sizes with members in 22 countries sent a letter to the Commission asking for a harmonised approach for footprinting at EU level.

The EU is ideally placed to promote harmonisation of methodologies across the Single Market, relying on experiences of Member States and private initiatives in this area and in discussion with the stakeholders. It is also in a unique position to pool together Member State good practices in producing two common methodologies and to provide the necessary support for their further testing, development, and implementation. The EU can bring an important value added, as further co-ordination would bring significant cost savings for governments and the private sector. All these will be originated from a single, EU-wide, coherent scheme associated to increased availability of good quality environmental performance data⁷⁸.

In addition, centralised and co-ordinated action by the EU is likely to carry more weight in international discussions on the harmonisation of methodologies and disclosure of information compared to individual calls by Member States. With a range of methodologies applied across the Single Market, the EU will have difficulty to argue for international approximation of approaches and methodologies – whilst with a common system to rely on, the EU can start using its leverage now to simplify the complex international context in this area.

4. OBJECTIVES

The **general objective** of the EU action is to improve the availability of reliable information on the environmental performance of products and organisations.

4.1. Specific objectives

Promote the use of a common methodology to assess and communicate the environmental performance of products and organisations.

4.2. Operational objectives

The above specific objective can be broken down into operational ones as follows:

Table 1 - Operational objectives

Specific objective	Operational objectives
Promote the use of a common methodology to assess and communicate the environmental performance of products and organisations	1.1 Launch two methodologies that are relatively simple to use, but also robust, one for the measurement of the environmental performance of products and one for the measurement of the environmental performance of organisations
	1.2 Encourage the take-up of the methodologies in Member States and by private actors

⁷⁸ Interesting to note that the UK and French schemes already make strong cross-reference to EU developments and Italy foresees a strong link as well. MS appear to be calling for a harmonised EC-level guidance/support on the assessment of the environmental footprint. See also the Council conclusions of 20 December 2010 inviting the Commission "to develop a common methodology on the quantitative assessment of environmental impacts of products, throughout their life-cycle".

	1.3 Develop product and sector specific environmental footprint category rules through an open, transparent, multi-stakeholder process
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Indicators to measure the fulfilment of these objectives are presented in chapter 7 on monitoring and evaluation.

4.3. Consistency with other EU policies

A number of EU policies are already in place directly or indirectly aiming at the reduction of negative environmental impacts resulting from consumption and production, which have strong links with this initiative: Europe 2020 Flagship Initiatives on Resource Efficiency and Innovation Union; Consumer Agenda; Unfair Commercial Practices Directive; Single Market Act; Small Business Act; Proposal for reform of the public procurement directives; Proposal for the disclosure of non-financial information by companies (in preparation); Industrial Policy Update; the Commission proposal for a 7th EAP. A more detailed explanation of the links is provided in Annex 4.

5. POLICY OPTIONS

5.1. Option 1. Baseline scenario – no policy change

The Baseline scenario has been presented in section 3.3, above.

5.2. Option 2. A new mandatory product policy framework

A new EU legal framework for sustainable products will replace and consolidate the existing product-related policy instruments included in the 2008 SCP/SIP Action Plan (such as for instance Ecodesign and Ecolabel). In practice, this would generate a stronger consistency between requirements concerning product-related environmental performance, by using common evidence to improve coordination in standard setting⁷⁹; by establishing a single, streamlined (and less costly) “criteria setting” process for the same product categories⁸⁰; and by applying a single process for developing and approving the requirements for the same product categories as well as homogeneous testing and verification methods.

The new legal framework would introduce requirements concerning product environmental performance, including setting minimum market access requirements. This would be done by integrating PEF and Product Environmental Footprint Category Rules (PEFCRs) into the approach currently used for developing implementing measures under the Ecodesign Directive. It will also identify environmental performance benchmarks for each product group and link the benchmarks to environmental performance classes, similarly to the approach used for the energy labels categories.

The new legislative framework instrument will progressively cover all priority products based on their overall environmental performance and will focus on the most important

⁷⁹ The criteria for the EU product-related policy instruments are usually set on the basis of technical and market evidence that is collected by way of specific preparatory studies. If this evidence is univocal for all the EU SCP instruments, assumptions on environmental and economic/competitive effects of new criteria are the same and the result can be a higher level of homogeneity.

⁸⁰ If the criteria are set as a result of a single process for different “uses”, taking into account the different objectives of the EU product-related policy instruments, a stronger consistency can be ensured (e.g.: in defining the thresholds for Ecolabel and Energy label).

environmental impacts (i.e. beyond energy) relevant for each product, setting also criteria for resource efficiency (e.g. recyclability, reusability, durability, recoverability, upgradeability, etc.). It would also cover conformity assessments and market surveillance activities, to make sure that the requirements are properly implemented to avoid free riding.

Priority product groups would be defined using criteria such as potential environmental impact (assessed through extended input-output analysis and process-based LCAs); household expenditure and consumption data based on Eurostat; production figures and market penetration of product groups within the EU and its Member States; willingness of stakeholders to contribute; and availability of high quality data⁸¹.

5.3. Option 3. A mandatory Organisation Environmental Footprint reporting framework

Under this option the use of the OEF methodology will be obligatory for large organisations in priority sectors for reporting/information provision purposes.

In order to prompt continuous improvement, the requirement will be associated with incentives for use and benchmarking. In collaboration with stakeholders the Commission will develop over time OEF sector rules (OEFSR)⁸², increasing the consistency of their environmental reporting and also, to some extent, the comparability of their overall environmental performance. Thus, it will be possible for an organisation to provide OEF-based information with the purpose of communicating its environmental performance and showing progress over the years; but in order to participate in benchmarking or sector-based league tables, an organisation will have to report on the basis of the established sector rules (the sector-specific OEFSR).

The new legislative instrument will progressively be applied to priority sectors identified on the basis of the significance of potential environmental impacts (assessed through extended input-output analysis and process-based LCAs); production figures and market penetration of sectors within the EU and its Member States; willingness of stakeholders to contribute; and availability of high quality data. OEFSRs will have to be developed for each of those priority sectors.

In order to avoid duplication of effort, OEFSRs will give guidance on how to use OEFSR-based mandatory reporting in conjunction with other reporting requirements stemming from EU legislation. Furthermore, interplay with relevant EU voluntary tools such as the EU EMAS system would be defined in order to avoid having to report based on different methodologies and to ensure coherence of published environmental information⁸³.

The policy will enable incentives at EU and/or Member State level to improve performance or to reward good performance, based on reliable, quantified information provided through the OEF and OEFSRs. A dialogue on incentive frameworks will be established with Member States to improve approaches to incentives and avoid environmentally harmful subsidies.

⁸¹ This is an indicative list of criteria that would be further refined and enriched during the implementation phase. Existing and new studies would be used, and an open dialogue with key stakeholders would provide further input.

⁸² Organisation Environmental Footprint Sectoral Rules are a set of tailored methodological specifications and instructions to be applied for a specific sector. See Annex 9

⁸³ The requirements would include rules regarding the measurement, benchmarking, and reporting of environmental performance.

5.4. Option 4. Integration of the methodologies for the environmental footprint of products (PEF) and organisations (OEF) in relevant policy instruments

Under this option the PEF and OEF methodologies are integrated in existing voluntary and mandatory policy instruments where relevant and technically implementable⁸⁴. For instance:

- Product Environmental Footprint (PEF) and Organisation Environmental Footprint (OEF) would be immediately used in instruments such as Ecolabel, GPP and EMAS for informing the criteria-development process⁸⁵ and the creation of Sectoral Reference Documents⁸⁶ for determining relevant environmental impacts and life cycle-based key performance indicators.
- Sectoral rules would be developed to apply OEF/OEFSRs to relevant sectors falling under the Industrial Emissions Directive to widen requirements and reporting on additional environmental aspects.
- The European Pollutant Release and Transfer Register (Regulation 166/2006) would be modified to integrate information based on OEF and its elements on a voluntary or obligatory basis.

Under this option it would also be necessary to establish a set of incentives, both by the public and private sector, that would reward companies and reinforce the positive effect on environmental performance improvements⁸⁷.

5.5. Option 5. Recommending the application of PEF and OEF on a voluntary basis

A Commission Recommendation will be addressed to Member States to recommend that whenever a Member State intends to introduce a voluntary scheme or requirements related to the measurement, verification, reporting, benchmarking, and communication of the environmental performance of products and organisations, it should apply the PEF and OEF methodologies respectively⁸⁸.

The Recommendation will be addressed to business as well. It will recommend using PEF and OEF methodologies in the calculation of the environmental footprint of products or the overall footprint of the organisation (company) whenever the producer or the organisation decides to undertake such a calculation. It would also invite the financial community (investors, insurers, banks) to use environmental performance information based on the application of OEF and/or OEFSRs in assessing environmental risks. In return, the recommendation will invite Member State to recognise any information or claim based on both methodologies as valid for the national scheme or the requirements they intend to introduce at national level.

The legal basis for a Commission Recommendation is Art. 292 of the Treaty on the Functioning of the European Union, which states that "The Commission, and the European Central Bank in the specific cases provided for in the Treaties, shall adopt recommendations". The Recommendation is considered to be a suitable tool because it is addressed to both public and private stakeholders and it provides an EU status to both methodologies. This will make it

⁸⁴ The option for integration and the technical implementability would need to be assessed in detail on a case by case basis. See Annex 9 for more information about the methodological developments needed to fully implement PEF and OEF in existing policy instruments.

⁸⁵ <http://ec.europa.eu/environment/ecolabel/products-groups-and-criteria.html>

⁸⁶ <http://susproc.jrc.ec.europa.eu/activities/emas/index.html>

⁸⁷ For more details on incentives, see Annex 20 and Annex 14.

⁸⁸ E.g. in case of national scheme or requirements related to non-financial reporting or promoting the use of environmental performance indicators in risk assessments in investment, the reference methodology would be OEF, coupled with OEFSRs.

easier for the Commission to continue the international dialogue on approximation of existing methodologies.

As part of this policy option the Commission will continue developing the methodologies to allow for all potential areas of application. A three-year testing starting from 2013 will be organised in order to pilot the development of the first Product Environmental Footprint Rules (PEFCRs) and Organisation Environmental Footprint Sector Rules (OEFSRs). The pilot will also give the opportunity to test different approaches (e.g. test different communication channels for product environmental performance information to final consumers; different verification systems; cooperation in the supply chain; practical testing of the interplay with EMAS; in case of Member State participation, including PEFCRs/ OEFSRs in their incentive system; use of electronic tools in the development of the rules).

The use of meaningful incentives to stimulate performance improvement⁸⁹, reward forerunners, and facilitate the purchase of green products would also be recommended to Member States and relevant private actors. The recommendation will suggest that the selection of products and organisations entitled to incentives is based on the full or partial application of PEF/PEFCRs and OEF/OEFSRs. In addition to the Recommendation, a coordination mechanism will be set up by the Commission to enable exchanges between Member States on best practices, effectiveness of incentives, and potential areas of coordination. A dialogue will be initiated with the financial community promoting the use of environmental performance information in financial decisions.

Identically as in the case of option 4, PEF and OEF would be used in Ecolabel, GPP and EMAS for informing the criteria-development process⁹⁰ and the creation of Sectoral Reference Documents⁹¹ for determining relevant environmental impacts and life cycle-based key performance indicators.

This option will include work at the international level to promote the approximation of methodologies and discussions with private initiatives on the acceptance of the methodologies.

The Recommendation tool, the coordination mechanism with Member States, 3rd country governments, and private initiatives, as well as the resulting incentives are all measures that would encourage the take-up of the methodologies.

The table below presents the relationship between objectives and policy options:

Table 3 – Intervention logic: relationship between problems, objectives and policy options

Problem – underlying issue	Specific objective	Operational objective	Relevant policy option
Proliferation of methodologies to assess and communicate the environmental performance of products and	Promote the use of a common methodology to assess and communicate the environmental performance of products and	1.1. Launch two methodologies that are relatively simple to use, but also robust, one for the measurement of the environmental performance of products and one for the measurement of the	Options 2, 3, 4 and 5

⁸⁹ E.g. fiscal incentives for consumers to purchase environmentally friendly products that exist in many Member States or reputational incentives such as the Japanese Top Runner system for electronic products.

⁹⁰ <http://ec.europa.eu/environment/ecolabel/products-groups-and-criteria.html>

⁹¹ <http://susproc.jrc.ec.europa.eu/activities/emas/index.html>

organisations	organisations	environmental performance of organisations	
		1.2. Encourage the take-up of the methodologies in Member States and by private actors	Options 2, 3, 4 and 5
		1.3. Develop product and sector specific environmental footprint category rules through an open, transparent, multi-stakeholder process	Options 2, 3, 4 and 5

6. ANALYSIS OF IMPACTS AND COMPARISON OF OPTIONS

6.1. General remarks and methodology

This chapter assesses and compares the economic, social, and environmental impacts of the policy options described in the previous chapter in relation to the baseline scenario.

The two comparison tables are organised according to options that are mutually exclusive. One table compares options related to products, the other to organisations.

A comprehensive analysis of the impacts is provided to help understand the tables. Impacts are scored as +++: very positive; ++: positive; +: slightly positive; 0: neutral; -: slightly negative; --: negative; and ---: very negative.

Distributional impacts were taken into consideration by analysing the capacity of different Member States and regions, and of different market actors (SMEs included) to take up similar initiatives. It is expected that countries and regions entirely covered by the Convergence objective under Regional Policy (Bulgaria, Estonia, Latvia, Lithuania, Malta, Poland, Romania and Slovenia) have less capacity for take-up or implementation of such initiatives. The situation would be similar for regions covered by the same objective⁹². To complete the picture, Member States where indicators on the number of ISO 14001 certifications, EMAS registered organisations, EU Ecolabel licenses, the number of environmental infringement cases per million inhabitants, and the strength of transposition of EU law are weaker, would have more difficulty in complying with or taking up the initiatives. According to this analysis, the following countries are in the top ten on more than one indicator: Austria, Denmark, France, Germany, Greece, Hungary, Italy, the Netherlands, Spain, Sweden and the UK⁹³. It is expected that the capacity of these Member States would be stronger to implement the new initiative. Effective distributional impacts would be monitored, and mitigation measures devised in the future⁹⁴, if necessary.

Costs were calculated using cost data stemming from the testing of the PEF and OEF methodologies, available data on similar initiatives and methods, and by applying the Standard Cost Model⁹⁵. It is important to note that scores related to operational cost consider

⁹² http://ec.europa.eu/regional_policy/how/coverage/index_en.cfm

⁹³ [The ISO Survey, ISO, 2004;](#) [EMAS statistics, 30/06/2012;](#) Eurostat Ecolabel data, 2010; <http://ec.europa.eu/environment/legal/law/statistics.htm>

⁹⁴ See Annex 1 for the detailed results.

⁹⁵ See Annexes 10 and 11.

both implementation costs and cost reductions ensuing from simplifications or from increased resource efficiency.

For assessing impacts on SMEs, the analysis took into consideration the recent Eurobarometer on SMEs and resource efficiency and studies. An SME test was completed based on the findings⁹⁶. In assessing the benefits arising from using Life Cycle Assessment, we have collected anecdotal evidence from company sustainability reports. To assess the potential uptake of PEF and OEF, available data from similar schemes was collected and analysed.

6.2. Analysis of impacts

Below we provide a synthesis of the analysis of economic, social and environmental impacts. The detailed analysis of all factors considered (functioning of the internal market and competition, competitiveness, trade and investment flows, operating costs & conduct of business, impact on SMEs, administrative burden on businesses, burden for public administrations & simplification potential, innovation & research, consumers & households, employment and labour markets, social inclusion and protection of particular groups, public health and overall environmental impact) are described in detail in Annex 1.

6.2.1. New mandatory product policy framework (Option 2)

Economic Impacts (neutral, 0)

The mandatory approach would enhance the functioning of the Single Market by providing a single reference framework and a fully level playing field for cross-border trade. The impact on costs for the public administration would be negative due to the need to increase market surveillance activities. This option would provide incentives for innovation through enhanced competition based on environmental performance covering a wide range of products, and would thus trigger more investment in green products.

The integration and better co-ordination obtained through a comprehensive “framework instrument” can decrease the costs of companies on, for instance, technical consultancies, or cost of compliance and also production costs. Based on in-house research and assuming that an LCA database is already available for use, the cost per product could be reduced to €1,500 for a simple assessment with a limited number of environmental indicators (3-5) and to €4000 -€10,000 per product group for a more in-depth LCA. It is expected that for any requirement that relates to communicating environmental performance information to final consumers, a maximum of 3-4 indicators would be used⁹⁷. This cost would be additional for companies that don't measure the environmental performance of their products, while it would represent a reduction of costs for those that already measure it and face the issue of having to apply different methodologies.

As companies not currently measuring their environmental performance of their products would be required to do so, there would be additional operating costs. Moreover, as the methodologies would not have benefited from being fully piloted and refined, this option would probably also lead to higher operating costs overall with the quick expansion of scope of application and so results in neutral economic impact overall.

SMEs active in green markets would have similar economic opportunities to their large counterparts, whilst for SMEs in supply chains a single reference methodology represents a

⁹⁶ See Annex 2.

⁹⁷ [Different options for communicating environmental information for products](#), BioIS/ DG Environment, 2012

simplification respectively to the current situation, where environmental information is requested from them based on different methodologies. Even if benefits exceed the cost, SMEs might perceive initial cost of implementing a more in-depth approach (€4,000 – 10,000) as high. Costs per product would be higher initially under this scenario, while the additional methodological developments and tools are not fully completed. Again, the lack of a piloting before widespread mandatory application risks increases in costs that could otherwise be avoided. Therefore, support measures are important elements under this option.

The two main positive impacts on consumers will be directly linked to the increased availability of green products on the market and on the decreased level of overlapping information and potential confusion deriving from the various product-related claims, label and certification schemes currently operating on the market. Effects on prices of green products cannot be determined at this stage because depend on the demand elasticity.

Social Impacts (slightly positive, +)

This policy option will contribute to the growth in green jobs through the increased demand for the products of eco-industries both in EU and internationally. The bulk of potential for new jobs lies in the growing market for products with green features, for which no employment figures are available. Marginal job increase is expected in the field of LCA experts and consultancy services.

The wider availability of information would provide access to green products for a wider array of social groups, simply by enabling green choices among the baskets usually bought. Only indirect effects are expected for public health through the overall improvement of the environmental performance of products. Social impacts are maximised under this option due to its mandatory nature, however, on the whole, they are often indirect, and therefore not very strong.

Environmental Impacts (very positive, +++)

This option will have a positive impact particularly related to the stimuli that will be provided to producers and consumers towards more the supply and demand of green products. The choice of gathering all the requirements concerning the design and the environmental performance of products in a unique “framework instrument” should provide producers with effective incentives to further develop green products. These effects can result in a general increase of the green products’ market shares, with a consequent improvement of the environmental performance.

Moreover, by developing a unique “framework instrument” on sustainable products, the Commission could ensure that the issues connected with resource efficiency, and in particular with material resource efficiency (e.g. recyclability, reusability, recoverability, upgradeability) are considered more carefully, in a synergetic and mutually consistent way when setting the requirements of SCP instruments, boosting resource efficiency in a more effective way.

Stakeholders' opinion

The setting up of a new legal framework instrument for sustainable products is not widely supported by stakeholders. Two options were considered in the consultation:

1. A new legal framework instrument in substitution to the existing product-related policy measures (i.e. Ecodesign, Energy Label, EU Ecolabel, Organic Label, GPP).

This option was considered not effective by the 38% of respondents (and slightly effective by the 10%).

2. A new legal framework instrument complementing and integrating the existing EU SCP regulatory instruments. This option was considered even less positive than the previous one (46% of respondents states that this option is not effective at all).

The two options are quite positively considered by citizens (66% and 52%, respectively), but not by organisations (business and NGOs) (i.e. only 23% of organisations believes that introducing a new “package” substituting and integrating the existing EU SCP regulatory instruments would be effective). SMEs emphasise that imposing mandatory requirements would create significant cost and burden for SMEs.

6.2.2. Mandatory OEF reporting framework (Option 3)

Economic Impacts (neutral, 0)

The mandatory application of a single methodology for measuring, reporting and benchmarking environmental performance for relevant impact categories would obtain the maximum of level playing field and fair competition on the single market, including for trading partners; provide simplification potential in the area of environmental reporting both for users and for public administrations (by rendering national schemes superfluous); and the maximum effect on inducing more innovation related to processes and supply chains, creating a critical mass of companies competing based on environmental performance and taking steps to improve it.

By measuring environmental performance throughout the supply chain, organisations can exploit efficiency opportunities and reduce cost risks⁹⁸ in a targeted way (considering where in the life cycle and what kind of impacts are the most important), increasing their competitiveness. The allocation of capital is improved through the availability of data to integrate environmental risks into investment decisions.

During the pilot tests, with the use of only the OEF umbrella methodology, this average cost was estimated at €30,190. It is expected that due to organisational learning and by using OEFSRs, with the improvement of access to and availability of data and with the development of tools provided by public administrations, industrial associations and the market, this cost would be at least halved starting from 2014⁹⁹. It is however not possible to estimate the exact cost due to lack of data and the novel nature of the OEF approach. This cost would be additional for companies that don't measure their performance, and would represent a reduction of costs for those that do and face the issue of having to apply different methodologies.

As companies not currently measuring their environmental performance would be required to do so, there would be additional operating costs. Moreover, as the methodologies would not have benefited from being fully piloted and refined, this option would probably also lead to higher operating costs overall with the quick expansion of scope of application and so results in neutral economic impact overall.

⁹⁸ Recent analysis suggests that a 10% increase in the price of commodities such as oil, coal, wheat and cotton corresponds to a 13% impact on earnings before interest, tax, depreciation and amortisation. Most of these risks stem from the supply chain ([More with Less: Scaling Sustainable Consumption and Resource Efficiency](#), World Economic Forum, 2012)

⁹⁹ For example, it is estimated that data collection and validation typically absorbs 70-80% of the cost of the study. By improving on this aspect only, very significant cost reductions would be obtained (Frans Berkhout, Rupert Howe: *The adoption of life-cycle approaches by industry: patterns and impacts*, Resources, Conservation and Recycling 20 (1997) 71-94)

For public administrations, additional costs would arise regarding enforcement of the scheme (e.g. compliance checks, verification structures).

SMEs active in green markets would have similar economic opportunities to their large counterparts, whilst for SMEs in supply chains a single reference methodology represents a simplification respectively to the current situation, where environmental information is requested from them based on different methodologies. However, even if benefits exceed the cost, SMEs might perceive the initial cost of implementing an OEF exercise (estimated c.a. €3,200 - €109,000, see also Annex 11) as high. Therefore, support measures are important elements under this option.

This option does not directly impact consumers.

Social Impacts (slightly positive +)

This option will contribute to an increased request for the products of eco-industries both in EU and internationally, thus contributing to the growth in green jobs as well. The bulk of potential for new jobs lies in the growing market for products with green features, for which no employment figures are available. Marginal job increase is expected in the field of LCA experts and consultancy services.

Only indirect effects are expected for public health through the overall improvement of the environmental performance of organisations. The policy option is neutral for social inclusion and the protection of particular groups. Social impacts are maximised under this option due to its mandatory nature, however, on the whole, they are often indirect, and therefore not very strong.

Environmental Impacts (very positive, +++)

The OEF methodology ensures that all relevant environmental impact categories for an organisation are taken into account, avoiding trade-offs between important environmental impacts. It adopts a life cycle approach, ensuring that the environmental performances throughout the value chain are taken into consideration, thus discouraging the shifting of environmental burdens along the value chain and directing efforts in a targeted way to most important environmental impacts and most important life cycle stages¹⁰⁰.

Through a mandatory implementation in large companies, and improvements triggered throughout the supply chain (including in SMEs active in the EU and suppliers and consumers in 3rd countries), the environmental improvement potential of this option is maximised.

Stakeholders' opinion

The stakeholder consultation presented two options that reflect on such an instrument. Regarding the introduction of a mandatory instrument for larger organisations in priority sectors most stakeholders reacted negatively (43%). However, opinions were split, as 33% of respondents were either in strong agreement or agreement with this option. The strongest agreement was expressed by public bodies (78%), followed by NGOs (64%) and the general public (61%). The strongest opponents were industry associations (92%) and private companies (76%).

Regarding the introduction of a mandatory instrument for larger organisations in all sectors, disagreement was stronger (53%). 37% of respondents expressed agreement. The split between the different stakeholder groups is similar to the previous question. Strongest

¹⁰⁰ See Annex 16

agreement was expressed by the general public (74%), followed by public bodies (73%) and NGOs (72%). Industrial associations disagreed the most (88%), followed by private companies (76%).

6.2.3. Integration of PEF and OEF methodologies in relevant policy instruments (Option 4)

Economic Impacts (neutral, 0)

A single basis integrated into existing instruments for measuring and reporting environmental performance of products and organisations would simplify the framework, reduce administrative costs related to applying these instruments simultaneously both for companies and public administrations, provide for a more uniform application of these instruments across the Single Market and provide a more level playing field for competition.

By measuring environmental performance throughout the supply chain, organisations can exploit efficiency opportunities and reduce cost risks¹⁰¹ in a targeted way (considering where in the life cycle and what kind of impacts are the most important) and represent a move towards better allocation of capital through the availability of data to integrate environmental risks into investment decisions.

The average cost for the use of the OEF methodology is estimated at €30,190 for the first application. It is expected that through organisational learning and by using OEFSRs and PEFCRs, with the improvement of access to and availability of data, and with the development of tools provided by public administrations, industrial associations and the market, this cost would be at least halved starting from 2014 for sectors and product groups where these developments take place¹⁰².

Based on in-house research and assuming that an LCA database is already available for use, the cost per product could be reduced to €1,500 for a simple assessment with a limited number of environmental indicators (3-5) and to €4000 -€10,000 per product group for a more in-depth LCA. The type of analysis to be implemented depends on the instrument into which PEF is integrated. It is expected that for any requirement that relates to communicating environmental performance information to final consumers, a maximum of 3-4 indicators would be used¹⁰³.

In the case of voluntary instruments, companies have the flexibility to decide on whether to incur these costs; in the case of mandatory instruments, changes will affect only companies falling under the existing instruments. Operating costs will probably be higher at the beginning as the methodologies will not have undergone piloting and there would be no readily available PEFCR/OEFSR. In the medium-long-term, when instruments are fully aligned, simplification and cost savings due to the single underlying method would be maximised.

Impacts on SMEs greatly depend on the instrument into which PEF or OEF are integrated, thus they need to be assessed when carrying out impact assessments for the individual

¹⁰¹ Recent analysis suggests that a 10% increase in the price of commodities such as oil, coal, wheat and cotton corresponds to a 13% impact on earnings before interest, tax, depreciation and amortisation. Most of these risks stem from the supply chain ([More with Less: Scaling Sustainable Consumption and Resource Efficiency](#), World Economic Forum, 2012)

¹⁰² For example, it is estimated that data collection and validation typically absorbs 70-80% of the cost of the study. By improving on this aspect only, very significant cost reductions would be obtained (Frans Berkhout, Rupert Howe: *The adoption of life-cycle approaches by industry: patterns and impacts*, Resources, Conservation and Recycling 20 (1997) 71-94)

¹⁰³ [Different options for communicating environmental information for products](#), BioIS/ DG Environment, 2012

instruments. Regarding the amount of costs per application, these are the same as presented in Option 2 and 3, but the scope of their incurrence varies according to the voluntary or mandatory nature of the instrument.

Impacts on innovation are similarly varying in intensity, depending on whether there is a critical mass of companies using PEF and OEF leading to a sufficiently strong reputational driver and competition based on environmental performance to trigger more innovation and take-up of green technologies.

Consumers and households would benefit from the availability of more reliable environmental information to take informed purchasing decisions. There is some evidence that shows that products with improved environmental performance are not necessarily priced higher than other products with the same functionality and characteristics, due to the cost savings achieved and through economies of scale¹⁰⁴.

Social Impacts (slightly positive, +)

Through increased request for the products of eco-industries both in EU and internationally that this option would reinforce, this policy option will contribute to the growth in green jobs. The bulk of potential for new jobs lies in the growing market for products with green features, for which no employment figures are available. Marginal job increase is expected in the field of LCA experts and consultancy services.

Only indirect effects are expected for public health through the overall improvement of the environmental performance of organisations. The option would improve access to green products for a wider array of social groups.

The intensity of social impacts would depend on the instruments wherein PEF or OEF is integrated.

Environmental Impacts (positive, ++)

The added value in tackling environmental impacts based on PEF and OEF would need to be assessed individually when revising the relevant instruments. The OEF and PEF methodologies ensure that all relevant environmental impact categories for an organisation or product are taken into account, avoiding trade-offs between important environmental impacts. They adopt a life cycle approach, ensuring that the performance throughout the value chain is taken into consideration, thus discouraging the shifting of environmental burdens along the value chain and directing efforts in a targeted way to most important environmental impacts and most important life cycle stages¹⁰⁵.

These elements would enhance improvement opportunities across several instruments. In the case of the voluntary instrument EMAS, which already encourages taking direct and indirect aspects into account, OEFSRs can support the creation of Sectoral Reference Documents by indicating relevant environmental impacts in a sector and can help define relevant indicators. It also has potential of being used as a reporting instrument for the environmental statement. These elements would enhance improvement opportunities across several instruments.

¹⁰⁴ University of Cambridge and Cranfield University (2009) Towards a sustainable industrial system

¹⁰⁵ It can potentially cover 14 impact categories (climate change; ozone depletion; human toxicity - cancer effects; human toxicity - non-cancer effects; particulate matter/respiratory inorganics; ionising radiation; photochemical ozone formation; acidification; eutrophication – terrestrial; eutrophication – aquatic; ecotoxicity - freshwater aquatic; land use; resource depletion - water; resource depletion – mineral and fossil fuel). Thus, it has the potential to direct improvements in the impact categories relevant for the given organisation, sector or product group. See Annex 16

The situation is similar for product instruments such as Ecolabel, GPP and Ecodesign: PEF and PEFCRs can be included in the criteria development process, thus enhancing the environmental potential of the initiatives. Depending on the nature of the instrument, implementation might be diverse, with diverse environmental improvement potential, thus the potential is difficult to gauge exactly.

Stakeholders' opinion

When asked about the option of "integrating the PEF methodology into the EU SCP regulatory instruments and policy measures", stakeholders expressed split opinions (32% expressed agreement, 33% was undecided, 35% disagreed). Most disagreement was expressed by industrial associations (55%) and private companies (44%), with also an important share of undecided responses (32% and 27% respectively). Public bodies gave support to this option (63%), whilst NGOs were mostly undecided (79%).

Stakeholders were split on the option of "expansion and/or strengthening of existing policy instruments" under the OEF section of the questionnaire (question 4.9). 31.4% of respondents strongly agreed or agreed; 24.7% were undecided; 44% disagreed or strongly disagreed (19.3%). Most disagreement was expressed by industry associations including SME associations (79%) and private companies (53%), whilst public bodies (75%) and the general public (71%) expressed more agreement. NGOs were mostly undecided (54%).

6.2.4. *Recommending the application of PEF and OEF on a voluntary basis (Option 5)*

Economic Impacts (slightly positive, +)

The Recommendation tool reinforces the effect on reducing the proliferation of methodologies and levelling the playing field on the Single Market by promoting the use of the common methodologies in Member States and organisations. However, due to the voluntary nature of this "soft law" instrument, certain positive effects are expected to be limited compared to the mandatory options and depend greatly on Member State and private sector take-up. This holds true also for positive impacts on innovation: it depends on whether there is a critical mass of companies using PEF and OEF leading to a sufficiently strong reputational driver and competition based on environmental performance to trigger more innovation and take-up of green technologies.

By measuring environmental performance throughout the supply chain, organisations can exploit efficiency opportunities and reduce cost risks¹⁰⁶ in a targeted way (considering where in the life cycle and what kind of impacts are the most important), increasing their competitiveness. There is a potential to improve the allocation of capital through the availability of data to integrate environmental risks into investment decisions. The impact on trade would be positive due to a wider use of a single methodology on the Single Market and through the efforts of international cooperation.

The amount of costs for companies is the same as with Option 3. However, due to the voluntary nature of the initiative, companies would only assume costs and burdens if they see a good reason to do so. Companies that may find it difficult to apply such methodologies would be able to benefit from the widespread piloting and build-up of experience in their application. Overall, the impact is considered slightly positive.

¹⁰⁶ Recent analysis suggests that a 10% increase in the price of commodities such as oil, coal, wheat and cotton corresponds to a 13% impact on earnings before interest, tax, depreciation and amortisation. Most of these risks stem from the supply chain ([More with Less: Scaling Sustainable Consumption and Resource Efficiency](#), World Economic Forum, 2012)

Impacts on SMEs depend on the take-up of the methodologies in Member States and by private initiatives. Due to the voluntary nature of the option, SMEs can benefit from the flexibility of adhering or not to the initiative. This is particularly important for those SMEs that are selling on national markets only and are therefore less in need of demonstrating their environmental performance (87%¹⁰⁷). In this case, Member States take-up and the nature of the Member State measure will define impacts on SMEs.

Public Administrations would have the flexibility of inserting the use of the methodologies into their policy mix according to their priorities and readiness. This flexibility might be particularly important for Member States that have developed less capacity in the environmental area.

Consumers and households would benefit from the availability of more reliable environmental information to take informed purchasing decisions. There is some evidence that shows that products with improved environmental performance are not necessarily priced higher than other products with the same functionality and characteristics, due to the cost savings achieved and through economies of scale.¹⁰⁸ The OEF component wouldn't have any direct impact on consumers.

Moreover, consumers will be directly involved during the pilots. Several communication vehicles (labels, QR codes, website information, etc.) will be tested with consumers through the collaboration of producers and retailers, analysing the amount and type of environmental information consumers will consider necessary during their buying and the impact played by information available on their consumption habits.

Social Impacts (slightly positive +)

This policy option will contribute to the growth in green jobs through the increased demand for the products of eco-industries both in EU and internationally. The bulk of potential for new jobs lies in the growing market for products with green features, for which no employment figures are available. Marginal job increase is expected in the field of LCA experts and consultancy services.

Only indirect effects are expected for public health through the overall improvement of the environmental performance of organisations. The option would improve access to green products for a wider array of social groups.

The intensity of social impacts would depend on the take-up of PEF and OEF in Member States and companies, and it is likely that at least in the first years of implementation, it would be positive, but marginal.

Environmental Impacts (positive, ++)

According to the UK impact assessment on company reporting, a newly reporting organisation which has started to monitor its energy related CO₂ emissions will experience a 2% reduction in energy related CO₂ emissions¹⁰⁹. For PEF, it is estimated that up to 5% - 30% reductions in environmental impacts could be generally achieved for products. The actual reductions would depend on individual products and would vary depending on environmental impact category. Tools such as PEF will contribute to achieving these reduction potentials, but it is doubtful that PEF is able to achieve the full potential on its own.

¹⁰⁷ Flash Eurobarometer 342 [SMEs, resource efficiency and the green markets](#), 2012

¹⁰⁸ University of Cambridge and Cranfield University (2009) Towards a sustainable industrial system

¹⁰⁹ [Final impact assessment](#), DEFRA, 2012; [The costs and benefits of mandatory greenhouse gas reporting](#). Adelphi's independent analysis of the Defra Impact Assessment.

The OEF and PEF methodologies ensure that all relevant environmental impact categories for an organisation or product are taken into account, avoiding trade-offs between important environmental impacts. They adopt a life cycle approach, ensuring that the performance throughout the value chain is taken into consideration, thus discouraging the shifting of environmental burdens along the value chain and directing efforts in a targeted way to most important environmental impacts and most important life cycle stages¹¹⁰. Although it is not possible to quantify the benefits, it can be safely assumed that greater improvements on a wider range of environmental indicators and throughout the value chain would occur. The intensity of these improvements is limited by the voluntary nature of the instrument.

Stakeholders' opinion

In the OEF section of the questionnaire, stakeholders provided the second highest agreement to the option for a "recommendation to Member States to use the common methodology for initiative related to the measurement, reporting, benchmarking or incentivising environmental performance" (41% strongly agree or agree). However, responses were split: 34% of respondents either strongly disagreed or disagreed. The stakeholder groups most favourable to this option include the general public (65%) and private companies (54%). Industrial associations were either undecided (39%) or disagreeing (37%). There was no clear indication from public bodies, with respondents split between the different categories.

In the PEF section of the questionnaire the question closest to this option is "voluntary scheme on communication and benchmarking of product environmental performance based on the PEF methodology". In general, all stakeholders were favourable to this option, except NGOs which were split (50% disagreement). Support from public bodies was highest (50%), followed by industrial and trade associations (46%), private companies (41%) and citizens (41%).

6.3. Comparison of policy options related to environmental performance of products

For the purposes of comparison and in order to create groups of options that are mutually exclusive, the policy options presented above are clustered according to whether they relate to the environmental performance of products or of organisations:

Table 2 - Grouping of policy options

Grouping	Mutually exclusive policy options
Policy options related to the environmental performance of products	Option 2 – New mandatory product policy framework
	Option 4 – Integration of PEF and OEF into relevant policy instruments
	Option 5 – Recommending the application of PEF and OEF on a voluntary basis
Policy options related to the environmental performance of organisations	Option 3 – A mandatory OEF reporting framework
	Option 4 – Integration of PEF and OEF into relevant policy instruments
	Option 5 – Recommending the application of PEF and OEF on a voluntary basis

¹¹⁰ See Annex 16

Table 4 – Comparison of impacts of options related to the environmental performance of products

Policy option Impact category	2. A new mandatory product policy framework	4. Integration of PEF and OEF in relevant policy instruments	5. Recommending the application of PEF and OEF on a voluntary basis
Functioning of the internal market and competition	+++	++	++
Competitiveness, trade and investment flows	++	++	+
Operating costs and conduct of business	-	0	+
Impact on SMEs	-	0	+
Administrative burdens on businesses	+	0	0
Burden for public administrations and simplification potential	-	+	+
Innovation and research	++	++	++
Consumers and households	+	+	+
Overall economic impact	0	0	+
Employment and labour markets	++	++	++
Social inclusion and protection of particular groups	+	0	0
Public health	+	+	+
Overall social impact	+	+	+
Overall environmental impact	+++	++	++

6.4. Comparison of policy options related to environmental performance of organisations

Table 5 – Comparison of impacts of options related to the environmental performance of products

Policy option / Impact category	3. Mandatory OEF reporting framework	4. Integration of PEF and OEF in relevant policy instruments	5. Recommending the application of PEF and OEF on a voluntary basis
Functioning of the internal market and competition	+++	++	++
Competitiveness, trade and investment flows	++	++	+
Operating costs and conduct of business	-	0	+
Impact on SMEs	-	0	+
Administrative burdens on businesses	-	0	0
Burden for public administrations and simplification potential	-	+	+
Innovation and research	++	++	++
Consumers and households	0	+	+
Overall economic impact	0	0	+
Employment and labour markets	++	++	++
Social inclusion and protection of particular groups	0	0	0
Public health	+	+	+
Overall social impact	+	+	+
Overall environmental impact	+++	++	++

6.5. Comparison of options according to efficiency, effectiveness and coherence

The scoring system used for the comparing tables 4 and 5 helps in the assessing the relative strength of alternative options in each impact category considered, but it does not provide the relative weight of each impact category. Therefore, the analysis is complemented by Table 6, which compares the options in terms of their effectiveness, efficiency and coherence¹¹¹. This shows that although mandatory options (2 & 3) contribute to reaching the objectives and are also associated to the biggest potential for environmental improvement, they are also associated with higher initial costs for business and public authorities, making them less attractive in current times of economic crisis. Previous experiences in law-making in the EU has shown that the adaptation and transaction costs for business and public administration are less important when the introduction of a legislative instrument has been preceded by its voluntary application. On the basis of the analysis carried out in this report, this appears to be the case also for option 2 and 3, which could become more cost-effective after a piloting application of PEF and OEF as proposed under option 5.

Option 1 would only marginally contribute to reaching the objectives and would fall short on environmental and resource efficiency improvements as well. The performance of Option 4 is variable, depending on the instrument where PEF and OEF are integrated. Although the

¹¹¹ Effectiveness is defined as the extent to which options achieve the objectives; Efficiency is defined as the extent to which objectives can be achieved in a cost-effective manner; coherence is defined as the extent to which options are coherent with the objectives of EU policy and are likely to limit trade-offs across environmental, social, and economic domains.

potential for environmental improvements and reaching the objectives is strong on the long term, initially, it would generate higher costs, and in some cases, even duplication of costs. Option 5 represents the best balance between reaching objectives, the level of costs, and the expected environmental benefits, although the benefits are limited by the voluntary approach and depend on take-up.

Table 6 – Evaluation of the options in terms of effectiveness, efficiency and coherence

Option	Effectiveness (scale: neutral, moderate, medium, strong)	Efficiency (scale: neutral, low, medium, high)	Coherence (scale: neutral, moderate, high, very high)
1 – Baseline scenario	Neutral/ moderate contribution to the achievement of objectives	No additional resources needed (neutral)	Some relevant EU objectives regarding resource efficiency not met; moderate environmental and social benefits.
2 – New mandatory product policy framework	Strong contribution to the achievement of objectives	Overall medium to high costs for public authorities and companies. Potential cost savings due to a single framework for companies and public administrations currently using a methodology; higher costs for those currently not using a methodology	Relevant EU objectives regarding resource efficiency met; very high environmental benefits; moderate social benefits.
3 – A mandatory OEF reporting framework	Strong contribution to the achievement of objectives	Overall medium to high costs for companies and public authorities. Potential cost savings due to the use of a single methodology for companies and public administrations currently using a methodology; higher costs for those currently not using a methodology	Relevant EU objectives regarding resource efficiency met; very high environmental benefits, moderate social benefits.
4 – Integration of PEF and OEF into relevant policy instruments	Medium to strong contribution towards the achievement of objectives, depending on the instrument in which methodologies are integrated	Low costs for public administrations depending on the instrument used; some duplication of costs for companies while different frameworks co-exist; important costs savings on the longer term due to the use of a single methodology	Potential to meet relevant EU objectives regarding resource efficiency on the longer term; moderate to high environmental benefits depending on the instrument used; moderate social benefits
5 – Recommending the application of PEF and OEF on a voluntary basis	Medium to strong contribution to the achievement of objectives depending on take-up;	Overall moderate costs for companies and public authorities. Due to the voluntary nature of the	Potential to meet relevant EU objectives regarding resource efficiency depending on take-up;

	some loss of effectiveness due to the voluntary nature of the instrument	instrument, actors will choose to join if they see benefits to doing so.	high environmental benefits, moderate social benefits.
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6.6. The preferred option

The preferred option is 5 "**Recommending the application of PEF and OEF on a voluntary basis**" for the following reasons:

- It scores positively on all relevant aspects compared to the baseline scenario and overall it scores better than the alternative options in Tables 3 and 4.
- It represents the best balance between reaching objectives, the level of costs, and the expected environmental benefits, although the benefits are limited by the voluntary approach.
- A voluntary application allows for gradual further development¹¹² of the PEF and OEF methodology in a piloting process involving a wide range of stakeholders to reach full potential in the following years (e.g. through a mandatory application or through wide take-up);
- Consumers would also be involved in order to understand what information suits their needs best and whether environmental performance information provided based on PEF provides the reliability and comparability to take informed purchasing decisions. This policy option makes it possible to gather and analyse this information and reduce consumer confusion and increase consumer trust in environmental information in the medium – long-term.
- Due to its voluntary nature, this option gives flexibility to organisations and Member States to decide on the use of the methodology.
- It enables exploiting important efficiency opportunities both from an economic (identification of cost saving opportunities throughout the value chain; cost reductions for companies trading cross-border in the EU) and environmental (exploitation of performance improvement opportunities throughout the value chain, concentrating on the most important environmental impacts and life cycle stages, reputational pressure to improve environmental performance) point of view.
- The effects of this option depend on the take-up of the recommendation by Member States and other market actors. Taking a very conservative estimation based on data from similar schemes, it is assumed that an annual take up rate of between 5% and 10% can be reached both for PEF and OEF. In the beginning (and up to 2015), the take-up would be lower (under 1%) due to the time needed for building awareness of the methodologies and its voluntary nature. The uptake rate is expected to grow further with the availability of PEFCRs and OEFSRs, as high as 10%. These are conservative estimates that don't take into account the potential uptake of PEF and OEF by existing private initiatives¹¹³, the effect of incentives, and of tools simplifying the application of the methodologies.

¹¹² See detailed information about developments needed in Annex 9.

¹¹³ For instance, the response rate to the Carbon Disclosure Projects' questionnaire, sent out to the 500 largest enterprises on behalf of 551 investors with \$71 trillion of assets was 81% in 2011. The success of the scheme is largely due to investor pressure to respond. See CDP Global 500 Report 2011: [Accelerating Low Carbon Growth](#)

- Despite some significant benefits across the three pillars, Options 2 and 3 would entail higher costs at the current level of development of the methodologies. Furthermore, there is a risk that stakeholder ownership would be lower, affecting the acceptance and effectiveness of the instrument.
- In general, all stakeholders were favourable to the introduction of a voluntary scheme based on a PEF methodology, except NGOs (50% in disagreement). Support from public bodies was highest (50%), followed by industrial and trade associations (46%), private companies and citizens (both at 41%). Stakeholder opinion was divided on integrating the PEF methodology into the EU SCP regulatory instruments and policy measures and mostly unfavourable to a new mandatory measure (60% disagreement).
- Stakeholders provided the second highest agreement to the option for a "recommendation to Member States to use the common methodology for initiative related to the measurement, reporting, benchmarking or incentivising environmental performance" (41% strongly agree or agree). The stakeholder groups most favourable to this option include the general public (65%) and private companies (54%). Industrial associations were either undecided (39%) or disagreeing (37%). The most favoured option was the promotion of the common methodology on a voluntary basis (44% in agreement). The majority was in disagreement with policy options related to mandatory tools in priority (43%) or all sectors (52.8%) and to the integration of OEF into existing mandatory instruments (44%)

7. MONITORING AND EVALUATION

This chapter presents possible progress indicators and monitoring and evaluation arrangements to check the correct implementation of the preferred option. The presentation of the indicators is organised in a table showing also the operational objectives that the indicators measure. The monitoring of all indicators will start after the adoption of the policy, planned for the 1st quarter of 2013 and will be monitored annually. Deviations from this pattern are marked in the table.

Table 7 – Indicators for monitoring and their relationship to objectives

Indicator	Relevant objective
methodological milestones	
Normalisation ¹¹⁴ (one-off indicator, marking year of fulfilment)	1.1, 1.3
Improved availability of good quality data (results of capacity building and coordination processes internationally, qualitative assessment of EU data availability – public/private)	1.1, 1.2, 1.3
Pilots and product-group specific and sector-specific rules	
Number of stakeholders participating in the PEFCR and OEFSR process and the testing by type of stakeholder	1.3
Number of PEFCRs developed/ year	1.2, 1.3
Number of OEFSRs developed/year	1.2, 1.3
Analysis of consumer reactions to environmental performance information based on PEF (one-off analysis at termination of testing)	1.3

¹¹⁴ See Annex 9 for explanation.

Costs and benefits of PEF and OEF (one-off analysis at termination of testing)	1.2, 1.3
Take-up of methodologies in the Member States and private initiatives	
Number of initiatives taking up OEF and PEF per Member State	1.2
Number of private initiatives taking up OEF and PEF	1.2
Nature of initiatives (e.g. reporting, labelling, basis for providing incentives) using PEF/OEF	1.2
Screening against the Recommendation requirements (fulfilled, not fulfilled, partially fulfilled)	1.1, 1.2
Number of organisations/ products reporting/ communicating based on PEF/OEF	1.2
Market share/ turnover of products communicating PEF information	1.2
Number of organisations/products reporting/communicating improvements in environmental performance based on PEF/OEF	1.2, 1.3
Number of Member States participating in the coordination set up by the Commission	1.2
Incentives based on OEF (type, number, for financial incentives: amounts involved; if applicable, environmentally harmful subsidies avoided)	1.1, 1.2
Use of OEF to avoid Environmentally Harmful Subsidies in EU funding/ financing (description of use)	1.1, 1.2
Number of investors and amount of assets represented in the dialogue with the financial community	1.2
Operators in the financial community using OEF data for decision-making (e.g. integration into questionnaires – number of questionnaires requiring OEF-based data; assets covered by OEF-based data)	1.2
Use of OEF data in sustainability indices (stock indices including only sustainable companies based on investors' questionnaires and data provided by companies)	1.2

An overall review of the policies introduced by the policy initiative subject to the present Impact Assessment is foreseen by 2015, in correspondence with the review of some key SCP policy instruments. This initiative is also closely linked to the 7th Environmental Action Programme (7th EAP)¹¹⁵: it constitutes the first of a two-step approach, in which policy instruments are first implemented in the short term (until 2015) on a voluntary basis. At this time the merits of this voluntary approach will be reviewed to assess the possible additional benefits of a second step including mandatory requirements.

¹¹⁵ The adoption of the 7th EAP is planned for autumn 2012. The Impact Assessment Board approved the impact assessment on its meeting of 18 July 2012 through written procedure.