

**ILCD, PEF and PEFCRs  
Toolbox for the future market standard  
for assessment of product environmental  
footprint and communication**

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# The Commission Mandate



European Commission, Integrated Product Policy Communication (IPP), 2003:

"LCA is the best framework for assessing the potential environmental impacts of products, but the debate is ongoing about good practice"

"The European Commission will develop ...

- Handbook on best practice; best attainable consensus among stakeholders
- Co-ordination to make data more accessible and systematically collected
- Directory of LCA databases to be updated at regular intervals
- Platform to facilitate communication and exchanges"



# European Platform on Life Cycle Assessment (EPLCA)



**ISO Standards  
(14040-44, 14025)**

ILCD: International  
Reference Life Cycle Data System

**ILCD Handbook**

(Tools, database)

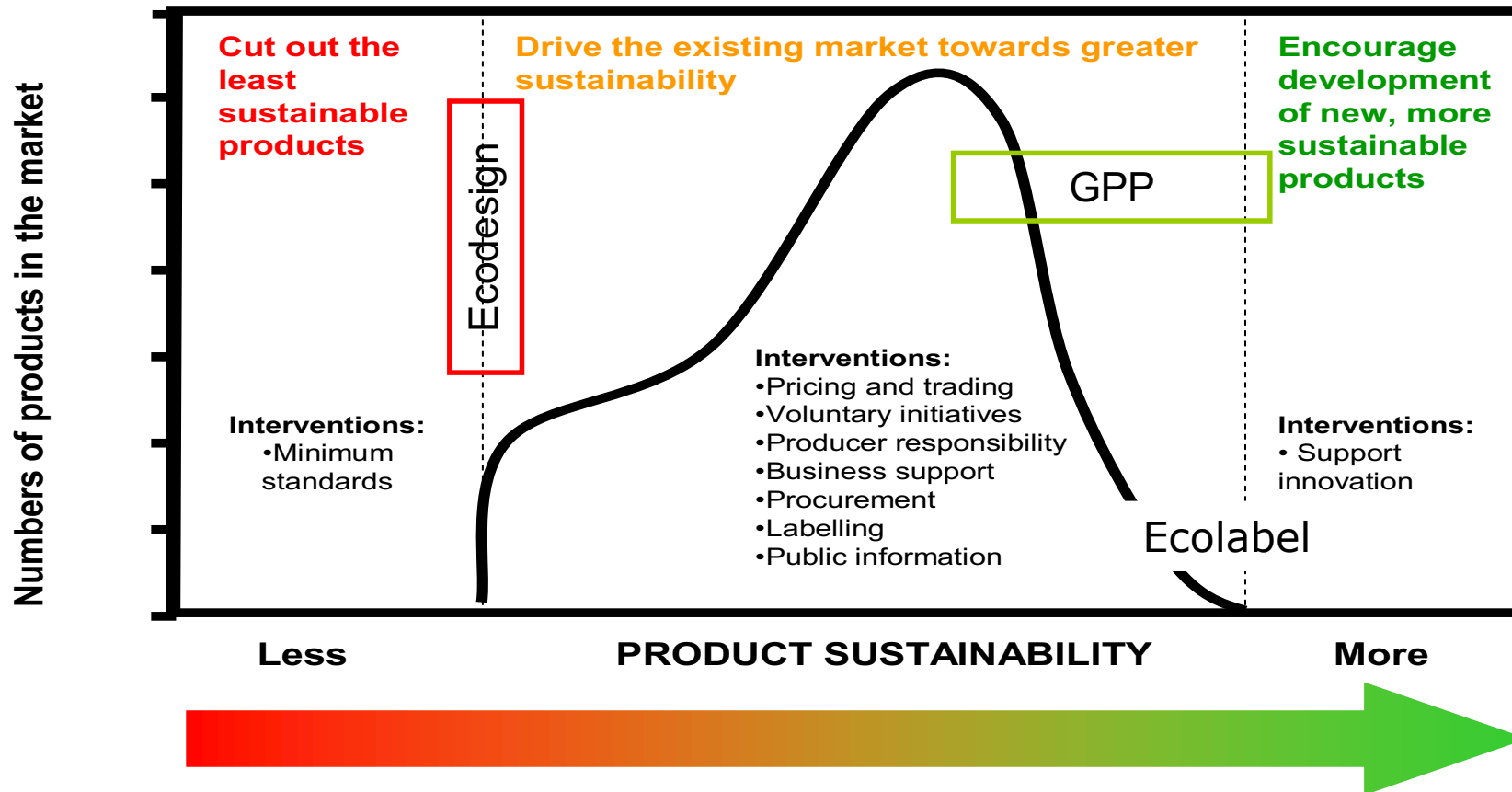
ELCD



# Product policies TODAY



## PRODUCT INTERVENTIONS – Overall approach





## **Proliferation**

Environmental labels  
Reporting schemes  
Certification schemes

## **Internal Market**

National "tailor-made" legislation

## **Competitiveness**

Increased of costs due to multiple requirements  
More difficult access to markets  
Unfair competition/misleading claims

## **Consumers**

Mistrust in company-driven green marketing

# The policy mandate

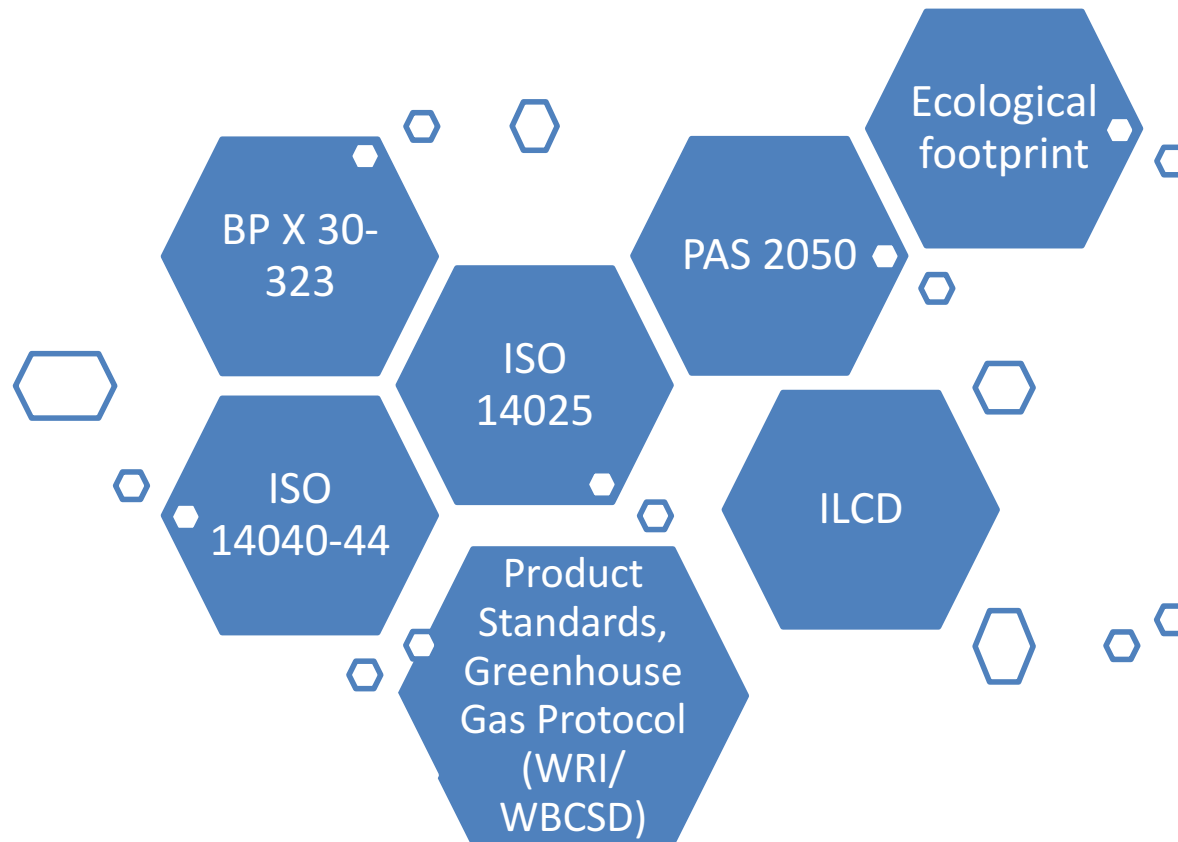


**Council Conclusions 20 December 2010**

The Council invites the Commission to *“develop a common methodology on the quantitative assessment of environmental impacts of products, throughout their life-cycle, in order to support the assessment and labelling of products”*



# Why not using something already existing?

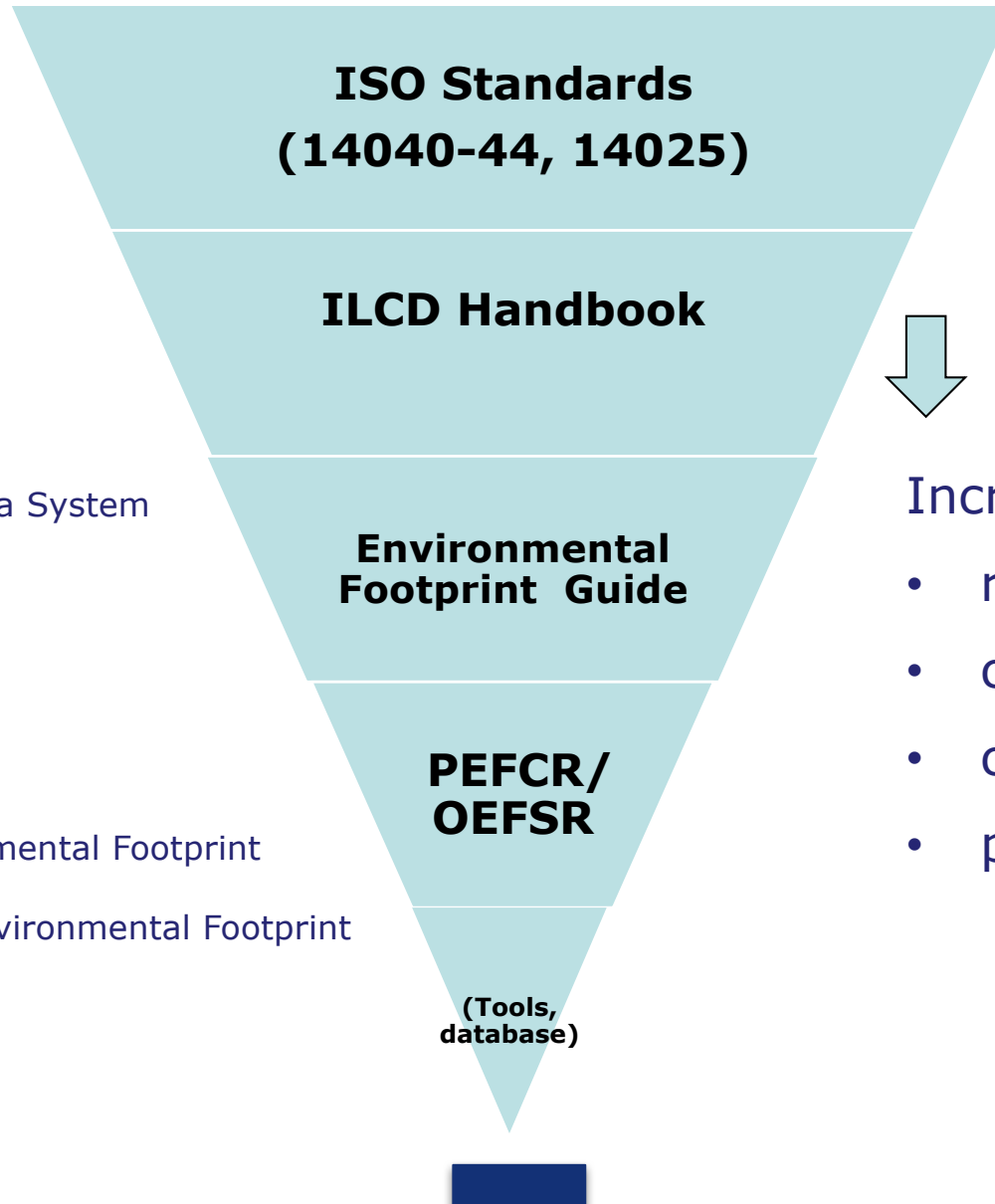


Full report available at: [http://ec.europa.eu/environment/eussd/smgp/dev\\_pef.htm](http://ec.europa.eu/environment/eussd/smgp/dev_pef.htm)





# Why not using something already existing?



ILCD: International Reference Life Cycle Data System

PEFCR: Product Environmental Footprint Category Rule  
OEFSR: Organisation Environmental Footprint Sector Rule

- Increasing
- reproducibility
  - consistency
  - comparability
  - practicality



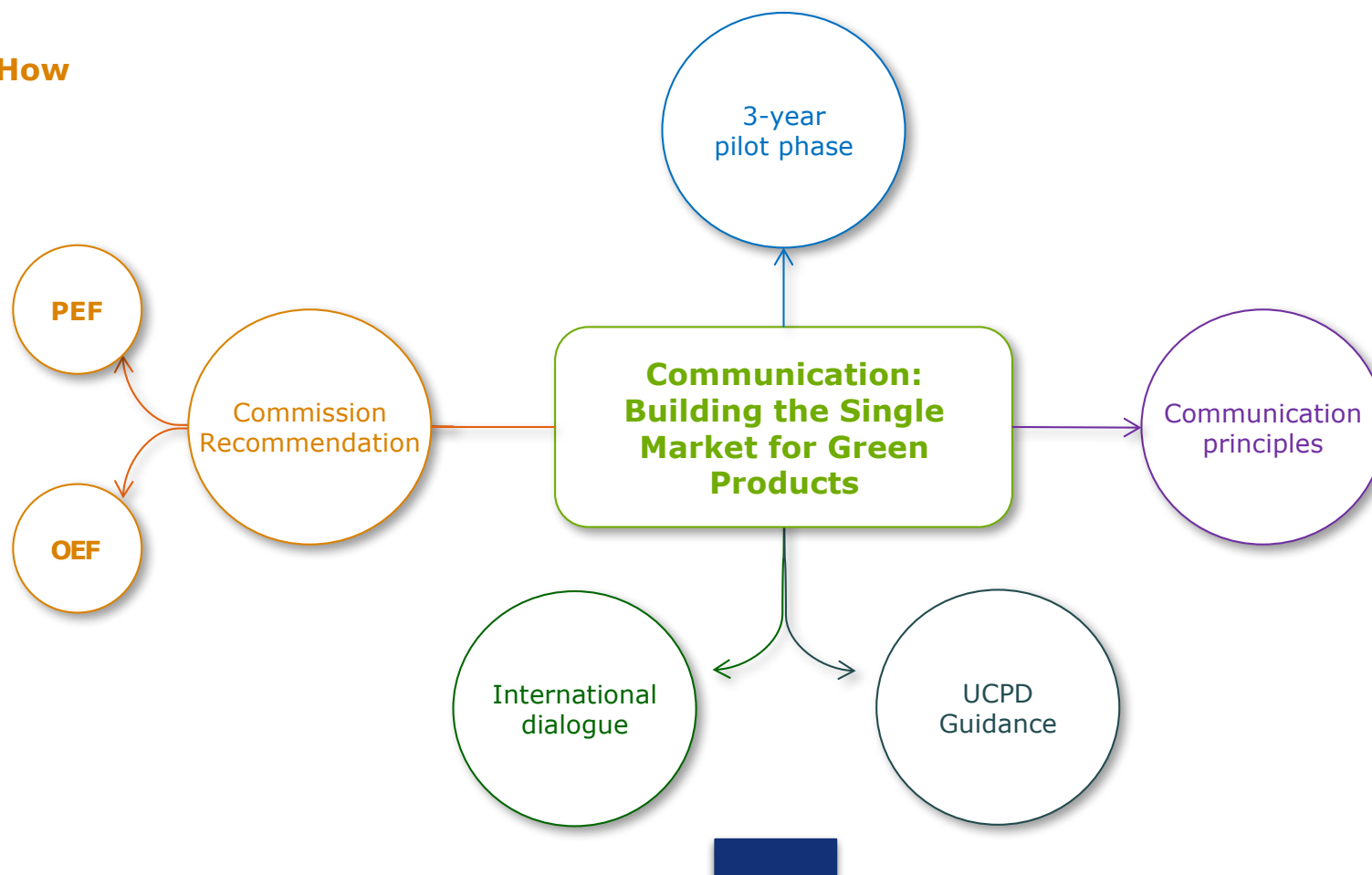
# Single Market for Green Products (SMGP)



## Objective

To improve the availability of clear, reliable and comparable information on the environmental performance of products and organisations

## How





## What drives responsible consumption (RC) purchases?

- Consumers are becoming willing to pay a substantial **price premium** and abandon their favourite brands in order to satisfy RC concerns (data based on actual sales). This stays true even in the recent troubling economic times.
- People want products to be "good for me and good for the world"
- People welcome responsible consumption purchases offerings in order to gain the feeling of doing something **new**, **different** and **right**

## What drives producers?

- Most consumer goods companies are struggling to grow. By contrast RC sales grew by about **9%** per year in the period 2010-2013 (in US)
- Market projections (valid both for Europe and US) expect RC products to account for **70%** of total grocery-sales growth within the next 5 years.

















# Key objectives
















- Level playing field (green marketing is a competitive issue)
- Tool for Resource Efficiency / Circular Economy
- Reduction of costs for companies
- Better management of the supply chain (materiality principle)
- Definition of an average environmental performance benchmark
- Identification of a reliable and affordable verification approach



## 1<sup>st</sup> wave of pilots

-  Batteries and accumulators
-  Decorative paints
-  Hot & cold water pipe systems
-  Liquid household detergents
-  IT equipment
-  Metal sheets
-  Non-leather shoes
-  Photovoltaic electricity generation
-  ~~Stationary~~
-  Intermediate paper products
-  T-shirts
-  Uninterrupted power supplies
-  Retailer sector
-  Copper sector

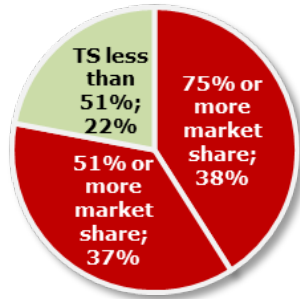
## 2<sup>nd</sup> wave of pilots

-  Leather
-  Thermal insulation
-  Beer
-  Coffee
-  Fish
-  Dairy products
-  Feed
-  Meat
-  Pet food
-  Olive oil
-  Pasta
-  Wine
-  Packed water

**120 applications: 22.5% were selected = 27 pilots**

Average stakeholders/pilot: **100**

Share of **non-EU** stakeholders: **12%**



The EU market is behind the pilots:  
73% of pilots have the majority of industry in the lead

+ PEF is **THE** news in the scientific community: we get invited to all major international events

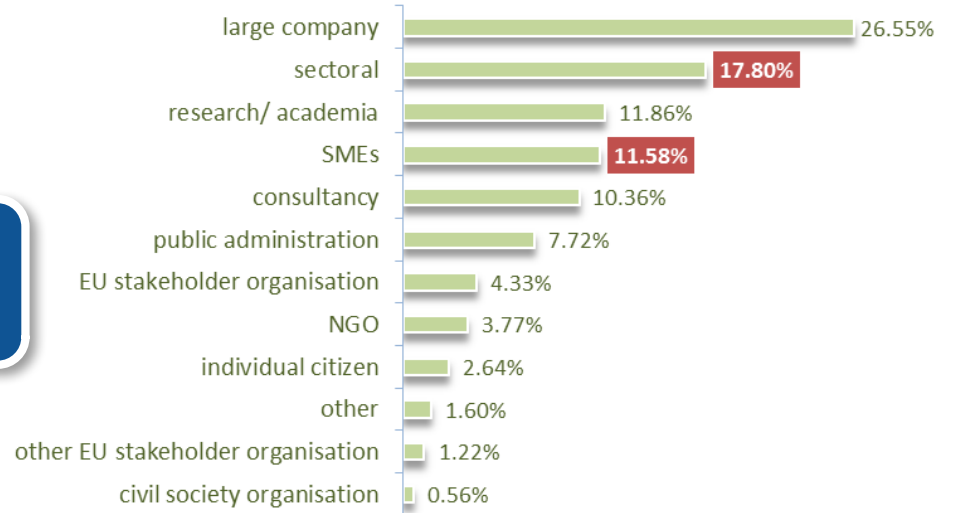


Number of pilot meetings: **1081**



Participants (27 pilots):

**1062 individual stakeholders (2712 participations)**



**288 leading stakeholders in 27 pilots**



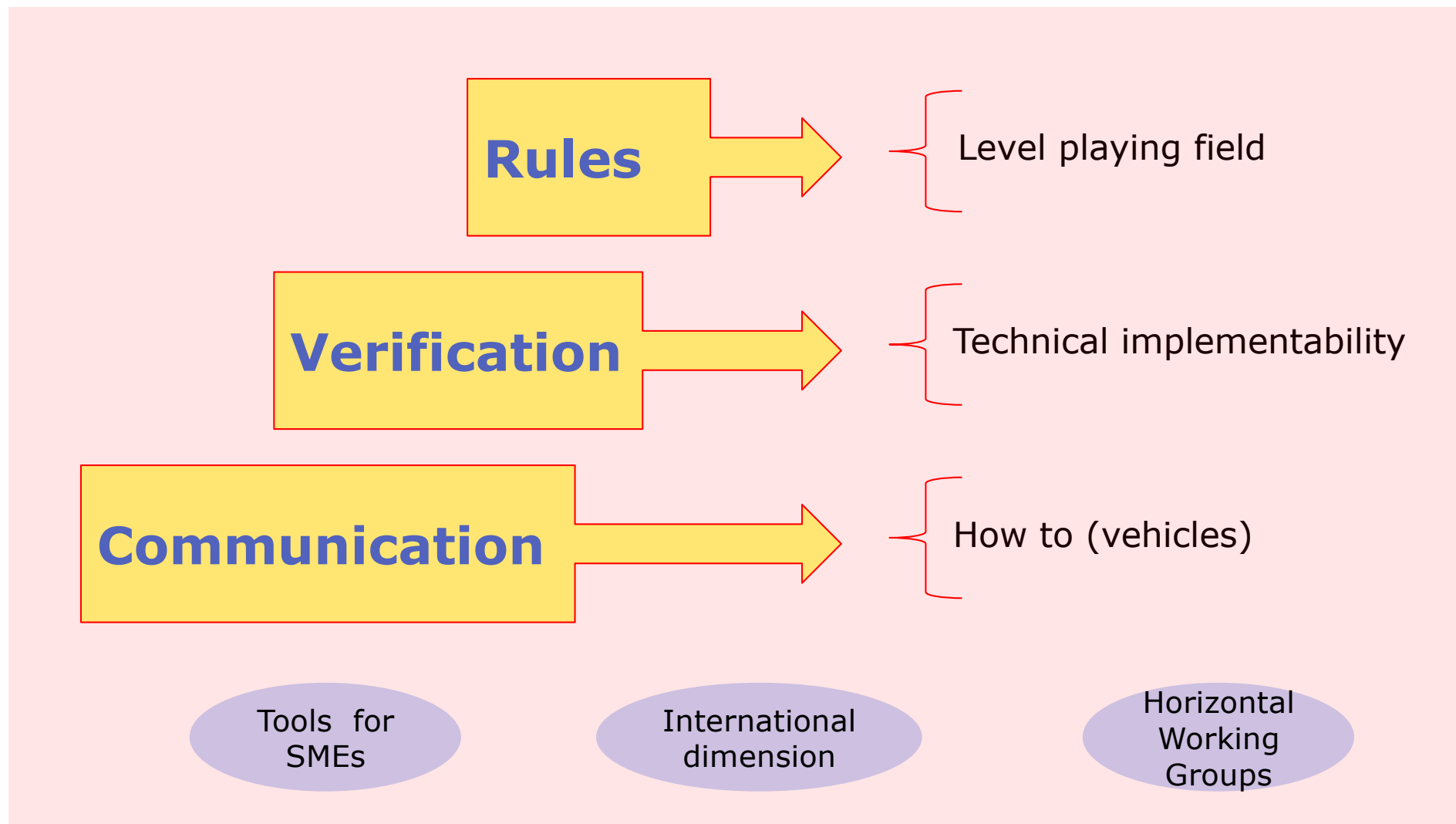
**Many are watching**

**87,839** unique visitors to the SMGP sites since kick-off  
They have viewed it **249,898 times**

The web-commenting tool had **28,899 views**  
Average nr of stakeholders registering/day: **5**

Pubic Administrations: **AT, BE, CZ, DE, DK, EL, ES, FR, HR, IT, PL, PT, SL, UK;**  
**AU, BR, CA, CH, EC, JM, JP, NI, NZ, SV, TN, USA**

# The EF Pilot phase at a glance



# What's new in EF?



- 😊 A single set of rules valid for the European market (PEFCR/OEFSR)
- 😊 Definition of a representative product/organisation
- 😊 Materiality approach (focus where it counts)
- 😊 New way of looking at foreground and background (compared to traditional LCA)
- 😊 Free availability of secondary data
- 😊 Benchmarks and, where relevant and appropriate, classes of environmental performance





# PEFCR development process



Guidance for the implementation of the EU Product Environmental Footprint (PEF)

## Overall development process:

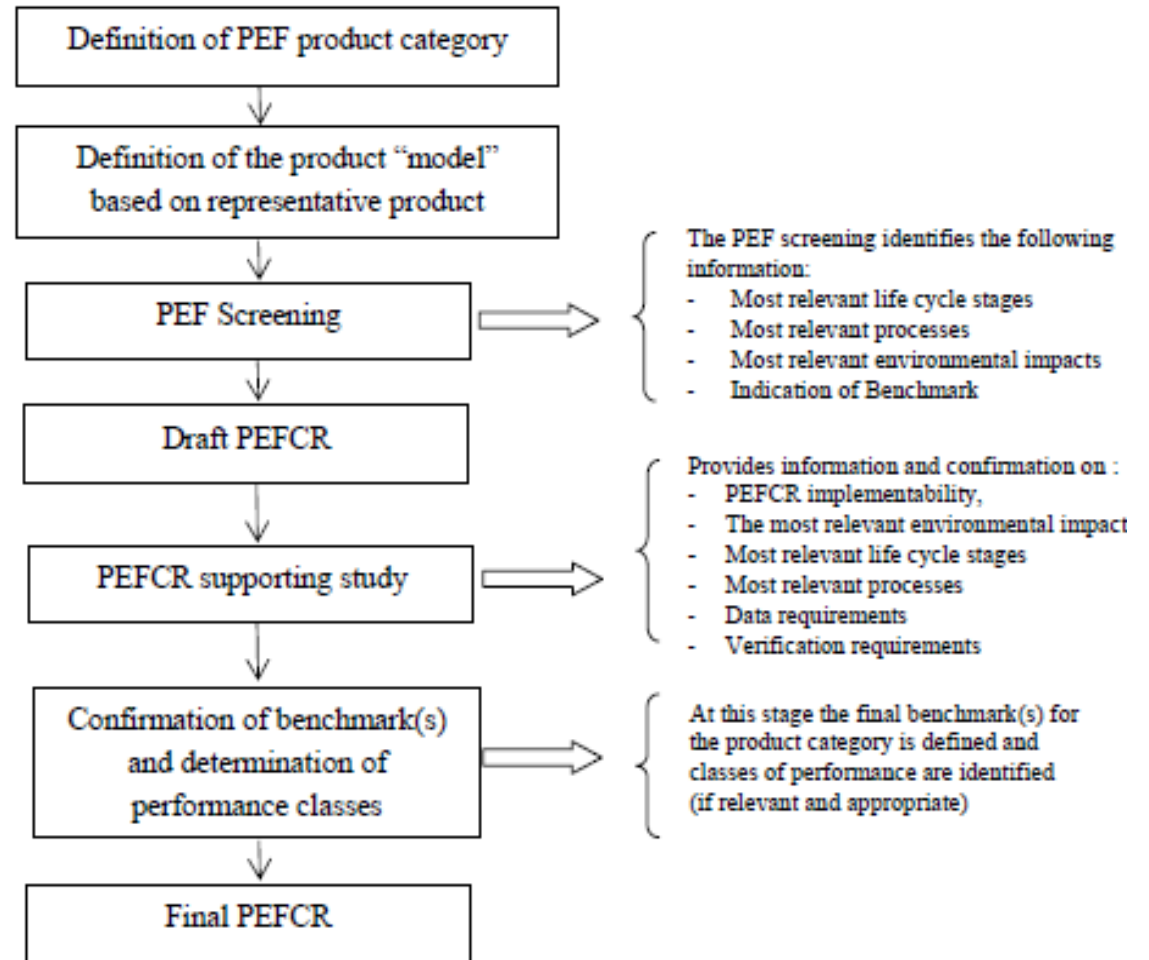
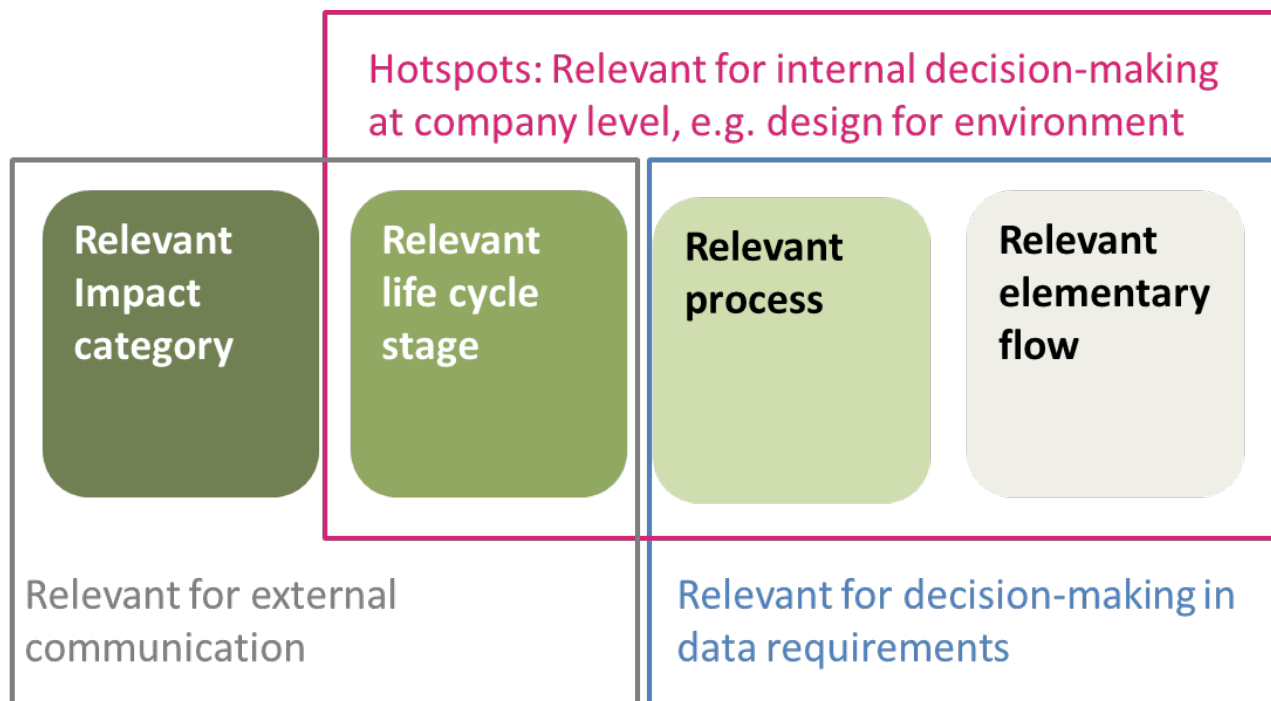


Figure 1. Steps to be followed for the development of PEFCRs.

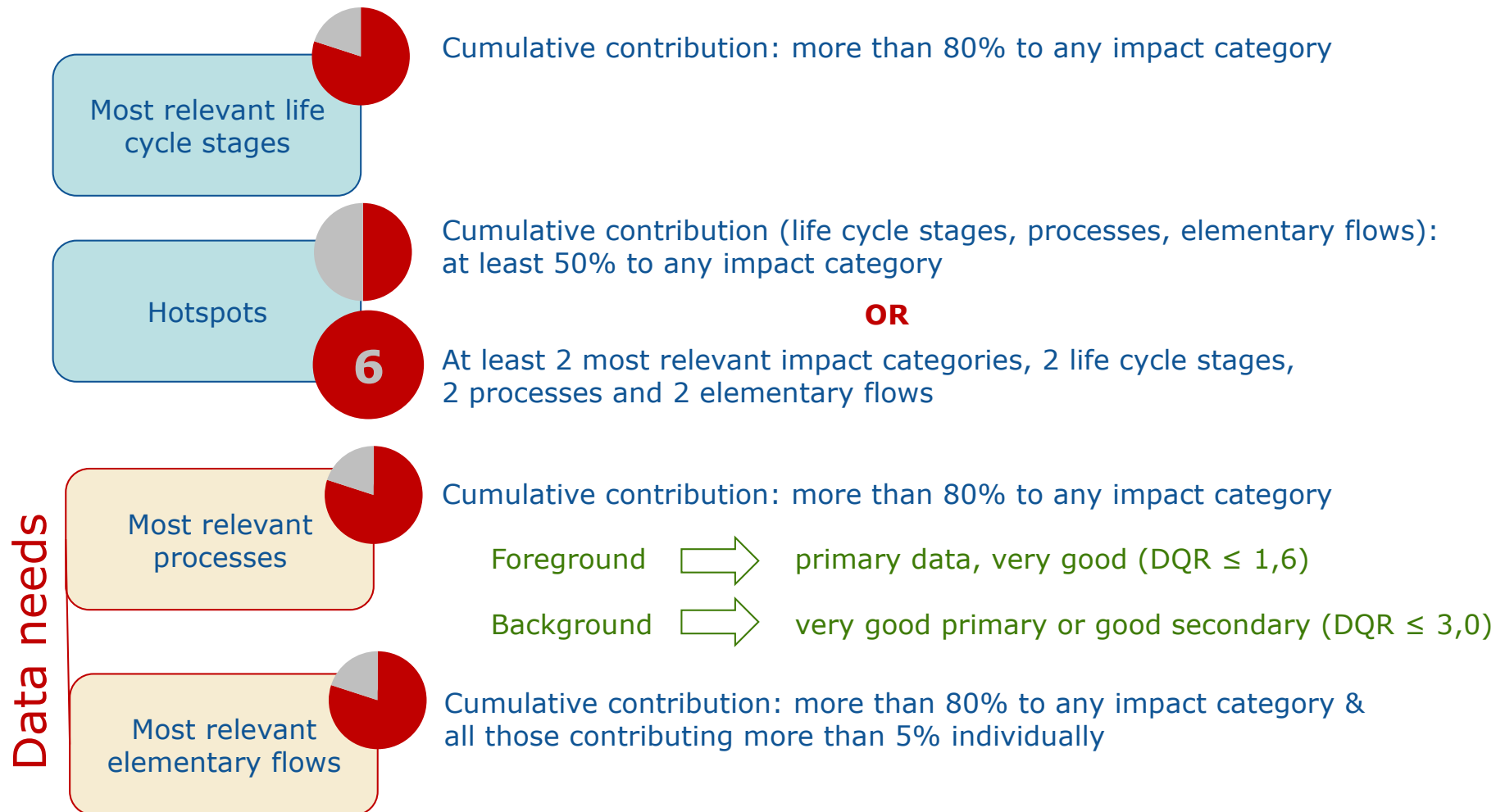
# Hotspots & most relevant contributions



# Relevance

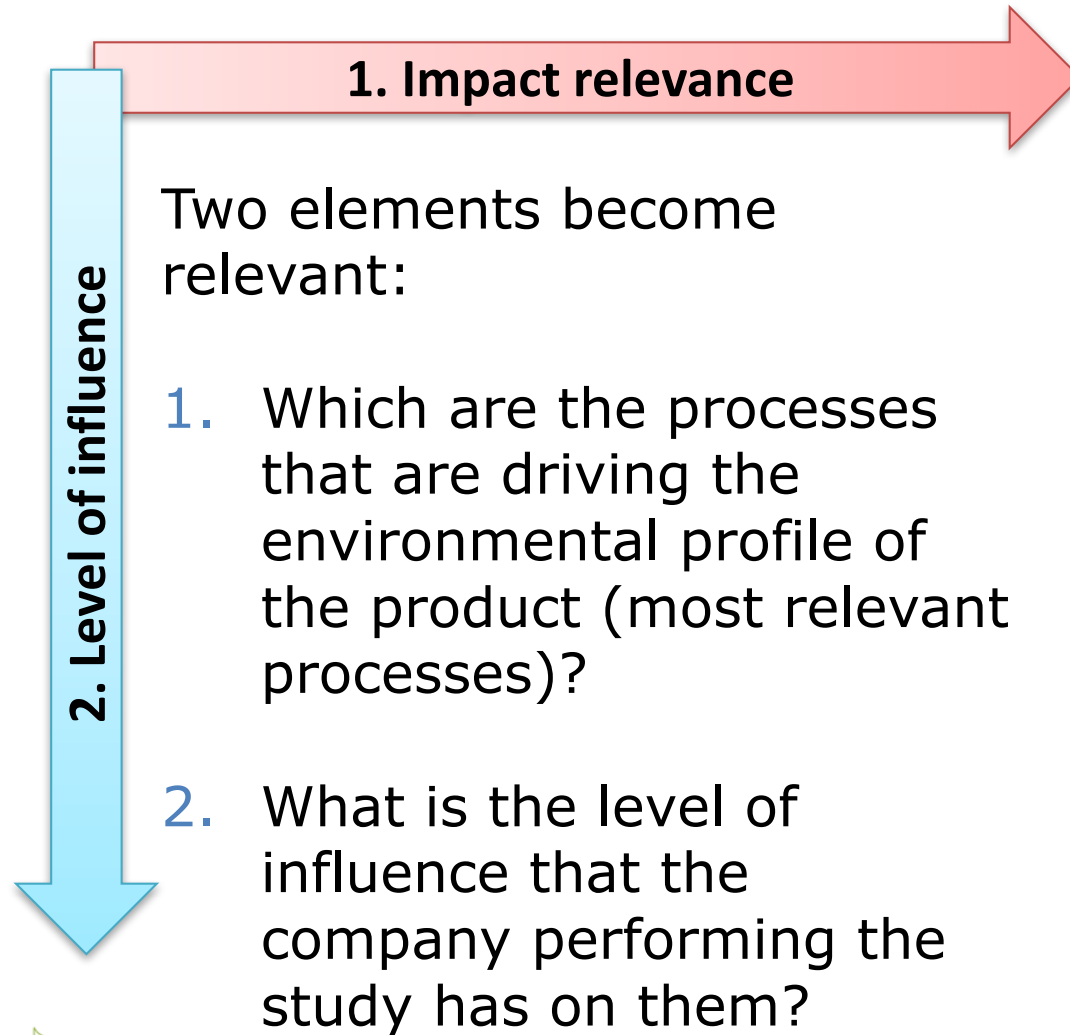


For each impact category, before normalisation and weighting



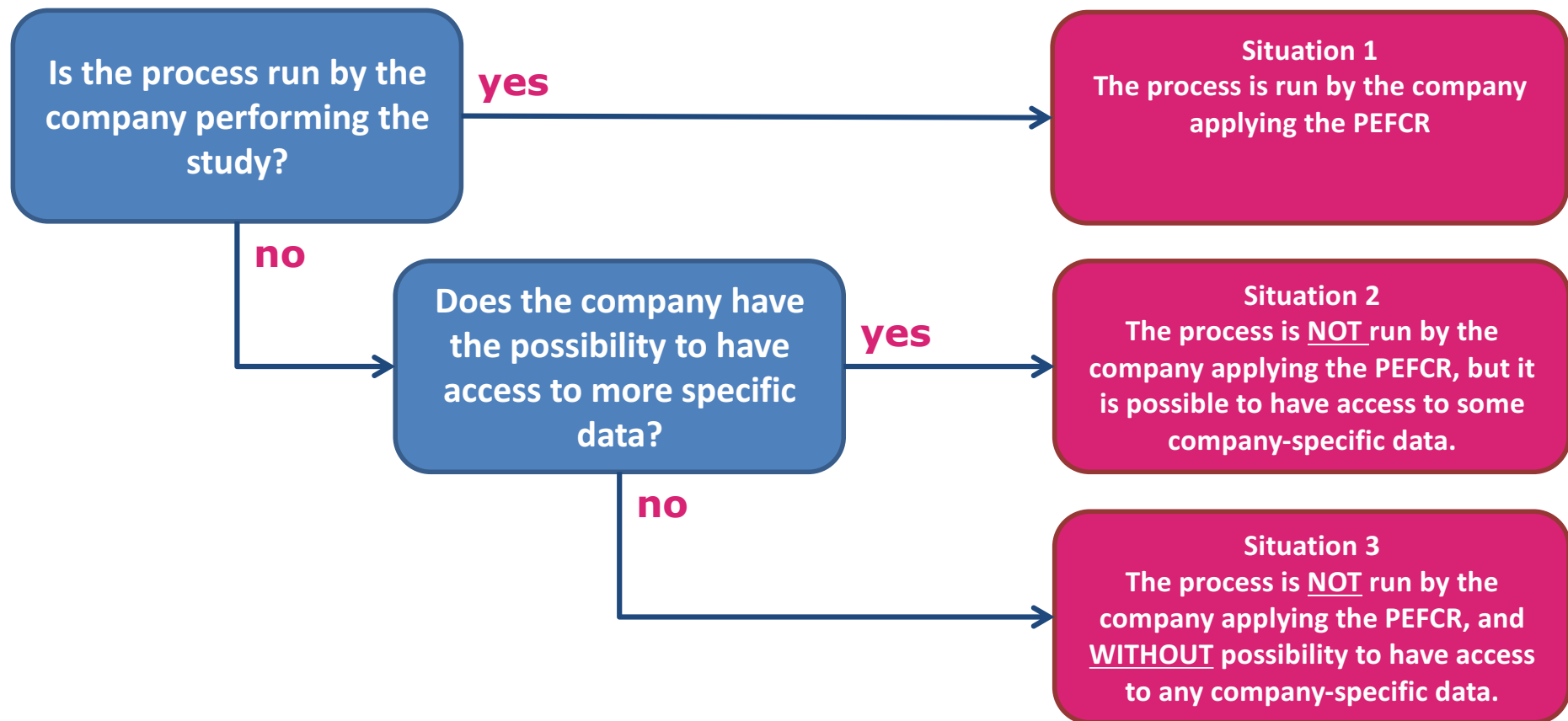
# Foreground and background in the EF context

**Materiality approach: focus where it counts**



# What to do when implementing the PEFCR?

## 2. Determine the **level of influence** by your company



# The data needs matrix

	Most relevant process	Other process
Sit. 1: process run by the company	Opt. 1 Provide company-specific activity data (as requested in the PEFCR) and create a company specific unit process dataset aggregated at least at level 1 (DQR $\leq 1.6$ ).	Provide company-specific activity data (as requested in the PEFCR) and create a company specific unit process dataset aggregated at least at level 1 <sup>52</sup> (DQR $\leq 1.6$ ).
	Opt. 2	Use default secondary dataset, in aggregated form (DQR $\leq 3.0$ )
Sit. 2: process <u>not</u> run by the company but with possibility to have access to specific information	Opt. 1 Provide company-specific activity data (situation1 / option 1)	Use default secondary dataset, in aggregated form (DQR $\leq 4.0$ )
	Opt. 2 Starting from the default secondary dataset provided, use company-specific activity data for transport, and substitute sub-processes for electricity mix and transport activity with supply-chain PEF compliant data (DQR $\leq 3.0$ )	
	Opt. 3 Use default secondary dataset, in aggregated form (DQR $\leq 3.0$ )	
Sit. 3: process <u>not</u> run by the company <u>without</u> access	Opt. 1 Use default secondary dataset, in aggregated form (DQR $\leq 3.0$ )	

## Guidance for the implementation of the EU Product Environmental Footprint (PEF)

### Overall development process:

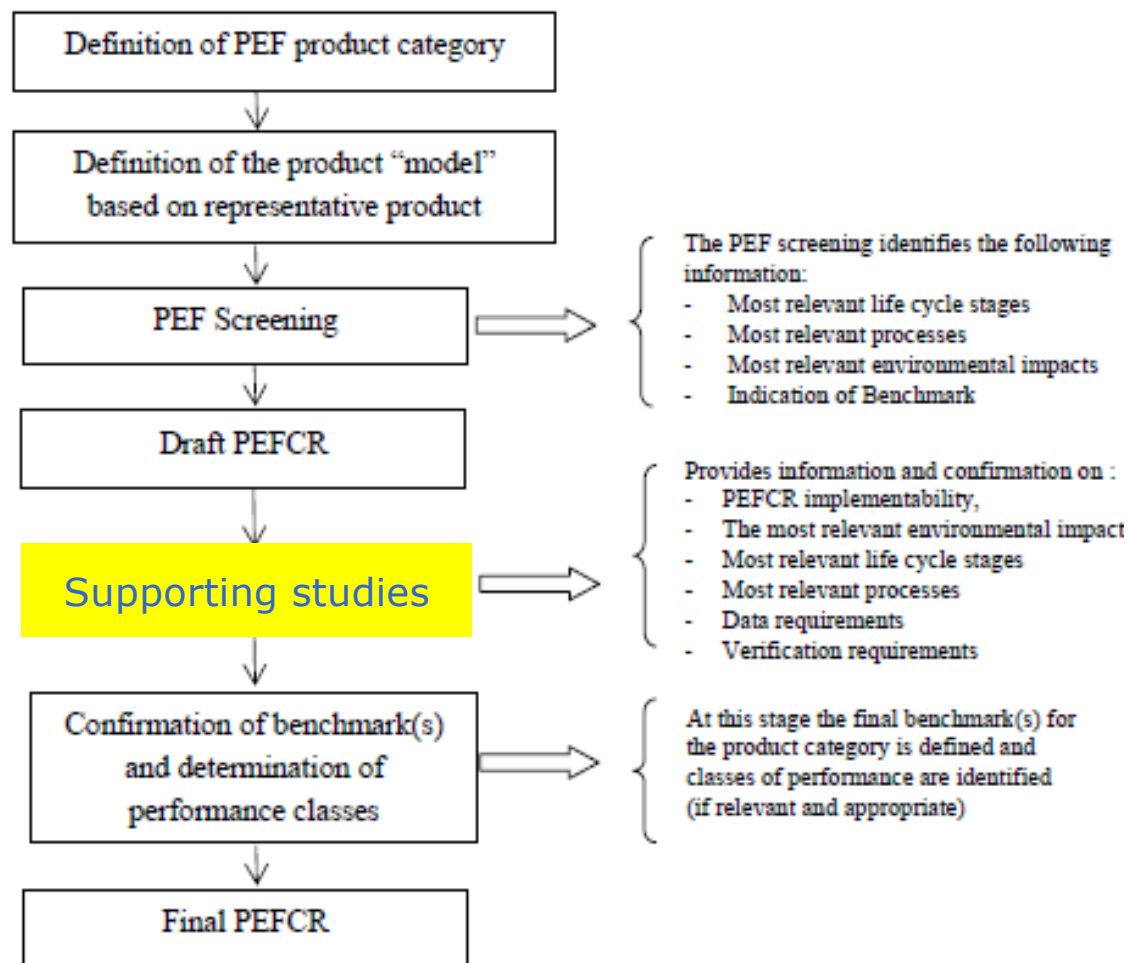


Figure 1. Steps to be followed for the development of PEFCRs.





**Scope:** Test different approaches for verification systems (embedded impacts, traceability)

**Features:**

- Balance between reliability, cost of verification and feasibility of verification
- No additional cost to industry - Independent Auditors (Ernst & Young) paid by EC funds
- Several verification options tested with future policy applications in mind

**Challenges:**

- Due to limited budget availability only about **40%** of the total number of studies/reports will be subject to audits



# Respect communication principles



- **Transparency**  
*How information was generated*
- **Availability and accessibility**  
*Simple, immediately understandable (max 3 indicators), availability of detailed information*
- **Reliability**  
*Scientifically accurate, ensure confidence*
- **Completeness**  
*All relevant impact categories*
- **Comparability**  
*Over time, and if possible, between similar products*
- **Clarity**  
*Adjusted to target audience, product & purpose*



# 5. Communicate based on the PEF profile



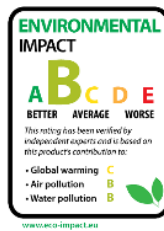
Supporting study

Possible to compare performance

Not possible to compare performance

XYZ Supermarket  
 Fantastic!  
 Your cart is greener than that of our average green buyer! 🌱😊

PEF A Milk 1€  
 PEF A detergent refill 4€  
 PEF A T-shirt 10€  
 Glass return -5€



	Raw Materials	Transport	Manufacturing	Application and Use	Equivalent Units
Climate Change 36	14.2	5.1	16.3	0.09	Grams CO <sub>2</sub> e
Acidification 18	8.9	1.7	7.2	0.03	Miligrams H <sup>+</sup>
Eutrophication 16	12.4	1.7	1.4	0.2	Miligrams N
Human Toxicity 10.1	7.4	0.2	2.3	0.2	10 <sup>-11</sup> CTUh
Ecotoxicity 9.9	8.3	0.5	1.1	0.01	10 <sup>4</sup> CTUe
Photochemical Smog 3.4	1.9	0.8	0.7	0.01	Grams O <sub>3</sub>
Non-renewable Energy 1.6	1.2	0.1	0.3	0.002	MJ primary
Mineral Resource Sand 1.1	1.01	0	0.02	0.1	Micrograms minerals
Iron 24.4	21.4	0	0.2	2.8	Miligrams minerals
Water Resource 0.12	0.02	0	0.02	0.08	Liters water

# I have an EPD. Do you?



European  
Commission



- 💣 95% of green claims are false or not verifiable (no statistics are available on EPDs)\*
- 💣 An EPD without a benchmark is like a picture in the darkness. It is showing something but you do not know exactly what

\* based on US data



EPDs are an excellent training in preparation for the future competition based on **true environmental performances**

**Did you get yours?** well done! You passed the primary school and now are ready for the big boys/girls

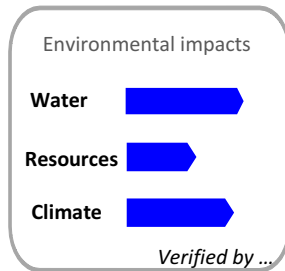
**You don't have it?** Bad luck



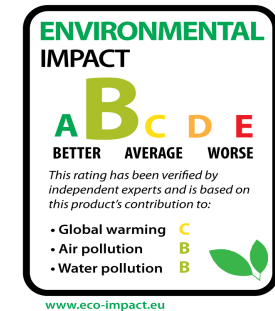
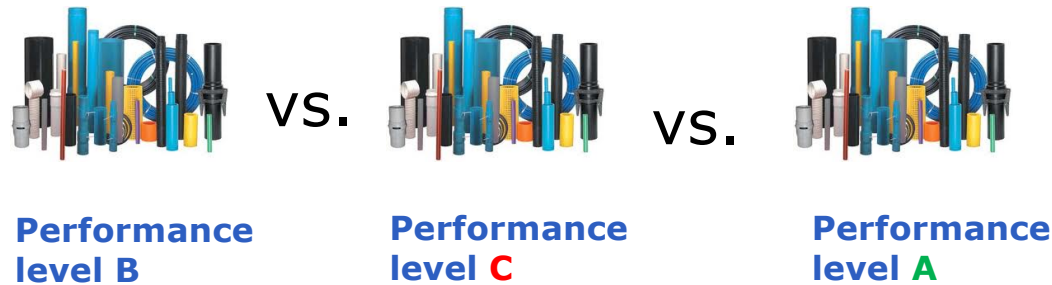
# Can LCA allow for product differentiation?



## NO PEFCR



## WITH PEFCR (fictitious example; possible if PEFCR available)



Is it possible?

Is it always possible?

Is it desirable/useful?



# Do YOU want it?



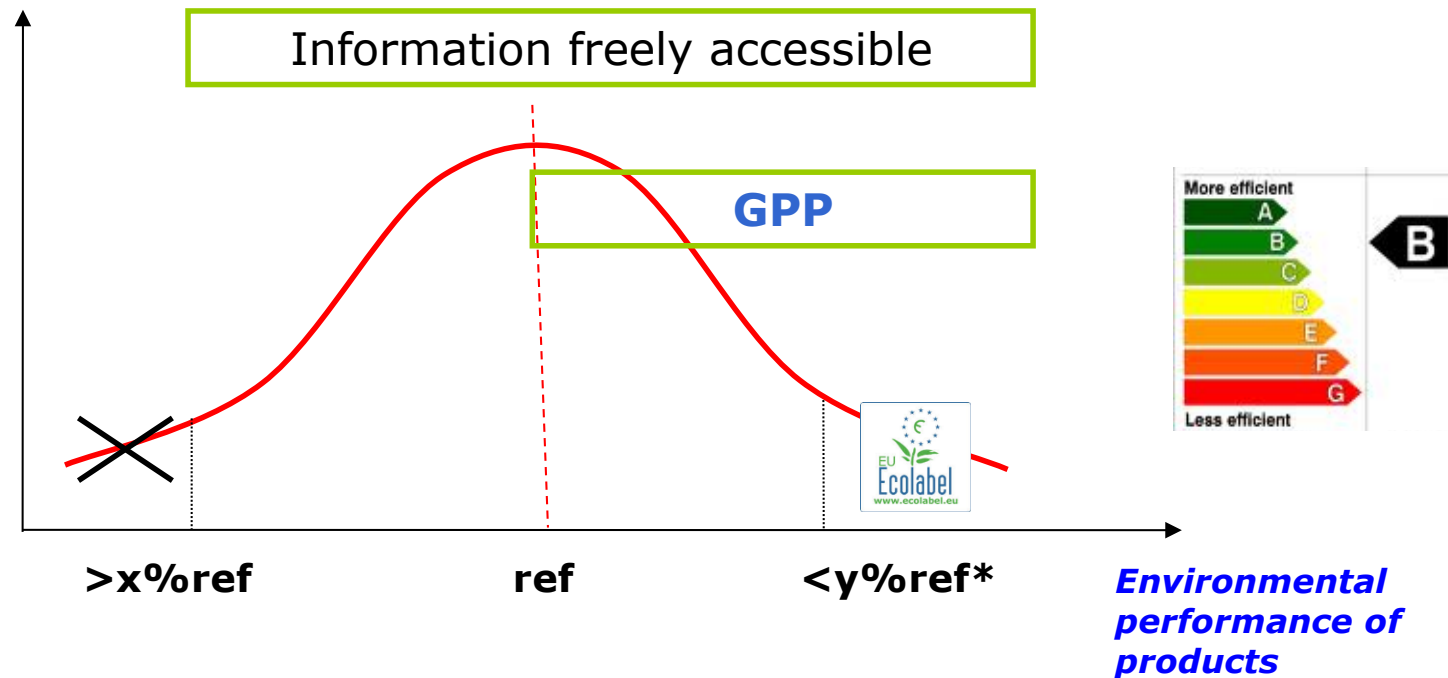
# Product policies TOMORROW (?)



**Product group:** XYZ

**Attribute:** Single attributes or weighted average

*Number of  
products*



\* Plus additional requirements non captured by LCA

# Possible uses of PEF studies



## Without PEFCR

PEF study according to the PEF official method

Design for Environment

Management of the supply chain

B2B and B2C communication of your own Environmental Profile (**NO** comparisons, **NO** comparative assertions)

## With PEFCR

Simplified PEF study, using the PEF tool and free secondary data

Design for Environment

Management of the supply chain

Comparisons and/or comparative assertions

Easier access to other schemes like, for example, the EU Ecolabel, GPP tenders, legislations requiring EPDs, future initiatives\*

\* All the examples listed here are only speculative. No discussion has taken place yet on the possible future use of PEF in existing or new legislations/initiatives



# Some “still open” methodological challenges



- How to correctly define the representative product when market data are not available
- How to deal with capital goods
- How to deal with the use phase
- End of Life formula
- Horizontal consistency among different pilots
- Normalisation and weighting
- How to trace and verify information for long supply chains
- How to deal with commodities
- How to calculate the classes of performance



# Some “political” challenges



Policies based on PEF would most probably contribute to support competitiveness and growth for EU companies, promoting circularity of economy, resource efficiency and state of the environment improvement

## **BUT**

- PEF promotes differentiation based on environmental performance of companies and/or sectors. This is welcome by the companies who have been investing in innovation and are already frontrunners but not from companies who did not do so.
- PEF promotes transparency of information. This is not necessarily equally appreciated by everybody.
- PEF might highlight that producing in some countries is, from a strictly environmental standpoint, more convenient than producing in others.
- PEF might provide more decision power to consumers and more tools to fight misleading claims



# Mid-term EF conference



## Where are we? Where could we go?

- Policy perspective on the Single Market for Green Products
- Sectoral/ topical reports and discussions (e.g. construction, food, retailers)
- Communication & benchmarking challenges
- Ideas on policy options

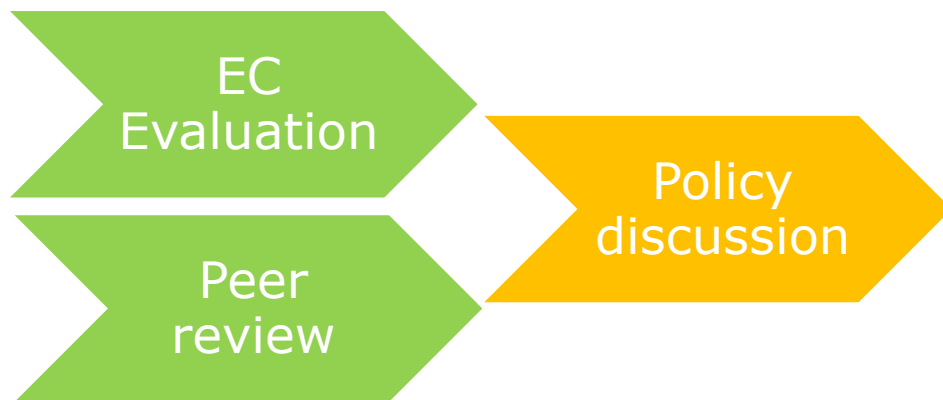


**Date: 3-4 November, Brussels**

To register: [http://ec.europa.eu/environment/eusssd/smgp/conference\\_2015\\_en.htm](http://ec.europa.eu/environment/eusssd/smgp/conference_2015_en.htm)



# Outlook



2017

? - ?



# PEF vision



European  
Commission



WATCHSHOP





European  
Commission



<http://ec.europa.eu/environment/eussd/smgp/>

<https://webgate.ec.europa.eu/fpfis/wikis/display/EUENVFP/>

[env-environmental-footprint@ec.europa.eu](mailto:env-environmental-footprint@ec.europa.eu)

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