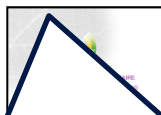


## EU Product Environmental Footprint

- Starting point and pilot projects
- Interim phase
- The way forward (incl. Ecolabel and EPD)





eam





European Commission


# Environmental impact

**A B C D E**

**Better Average Worse**



# EU Product Environmental Footprint pilot phase: 2013-2016

 <p>Home    About us    Policies</p> <h2>The Product Environmental</h2> <p>The work on the first wave of pilots started on the 4th November 2013. However, for the pilots on Thermal insulation and leather it has been agreed to start the work in June 2014.</p> <p>A factsheet on each of the ongoing pilots is included (see the links in the list below).</p> <p>A series of first stakeholder consultation meetings was organised in Brussels on the dates below for the pilots of the first wave. Issues discussed at this meeting included</p> <ul style="list-style-type: none"> <li>the precise definition of the product group;</li> <li>the results of the analysis of existing Product Category requirements of the Product Environmental Footprint</li> <li>the "representative product", which describes the market (see the <a href="#">Guidance document</a> for more details)</li> </ul> <p>Comments regarding these issues were gathered and will be provided in writing through the <a href="#">e-commenting wiki</a>. To create an ECAS account and fill a survey to get access to the e-commenting wiki, please contact the JRC. Further consultations and meetings will be announced.</p>	EF pilots of the 1st wave		EF pilots of the 2nd wave	
	<ul style="list-style-type: none"> <li><a href="#">Batteries and accumulators</a></li> <li><a href="#">Decorative paints</a></li> <li><a href="#">Hot and cold water supply pipes</a></li> <li><a href="#">Household detergents</a></li> <li><a href="#">Intermediate paper product</a> (JRC)</li> <li><a href="#">IT equipment</a></li> <li><a href="#">Leather</a></li> <li><a href="#">Metal sheets</a></li> <li><a href="#">Non-leather shoes</a></li> <li><a href="#">Photovoltaic electricity generation</a></li> </ul>		<ul style="list-style-type: none"> <li><a href="#">Beer</a></li> <li><a href="#">Coffee</a></li> <li><a href="#">Dairy</a></li> <li><a href="#">Feed for food-producing animals</a></li> <li><a href="#">Fish</a></li> <li><a href="#">Meat (bovine, pigs, sheep)</a></li> <li><a href="#">Olive oil</a></li> <li><a href="#">Packed water</a></li> <li><a href="#">Pasta</a></li> <li><a href="#">Pet food (cats &amp; dogs)</a></li> <li><a href="#">Wine</a></li> </ul>	
	<a href="#">Stationery</a>		30 April 2014	
	<a href="#">Thermal insulation</a>		(pilot kicks off in June 2014)	
	<a href="#">T-shirts</a>		14 March 2014	
	<a href="#">Uninterruptible Power Supply</a>		26 February 2014	

## Product Environmental Footprint Category Rules - Decorative Paints

Product category: Decorative paints  
Version number: version 1.0  
Date of publication/revision: April 2018  
Date of expiration: December 31<sup>st</sup> 2020

Developed by:  
Technical Secretariat Decorative Paints

Technical Secretariat Coordinator:  
CEPE: European Council of the Paint, Printing Ink and  
Artists' Colours Industry  
Contact person: Olympia Dolla  
Email: o.dolla@cepe.org  
Address: Av Van Nieuwenhuysse, 6 Brussels

Developed as a part of the European Commission  
initiative: Single market for green products



# Product Environmental Footprint (PEF)

A **methodology** that  
calculates

- the environmental impact of a product
- over the full life cycle of a product

PEF Category Rules

- the adaptations for a specific product



# EU PEF pilot project Decorative paint: 2014-2016

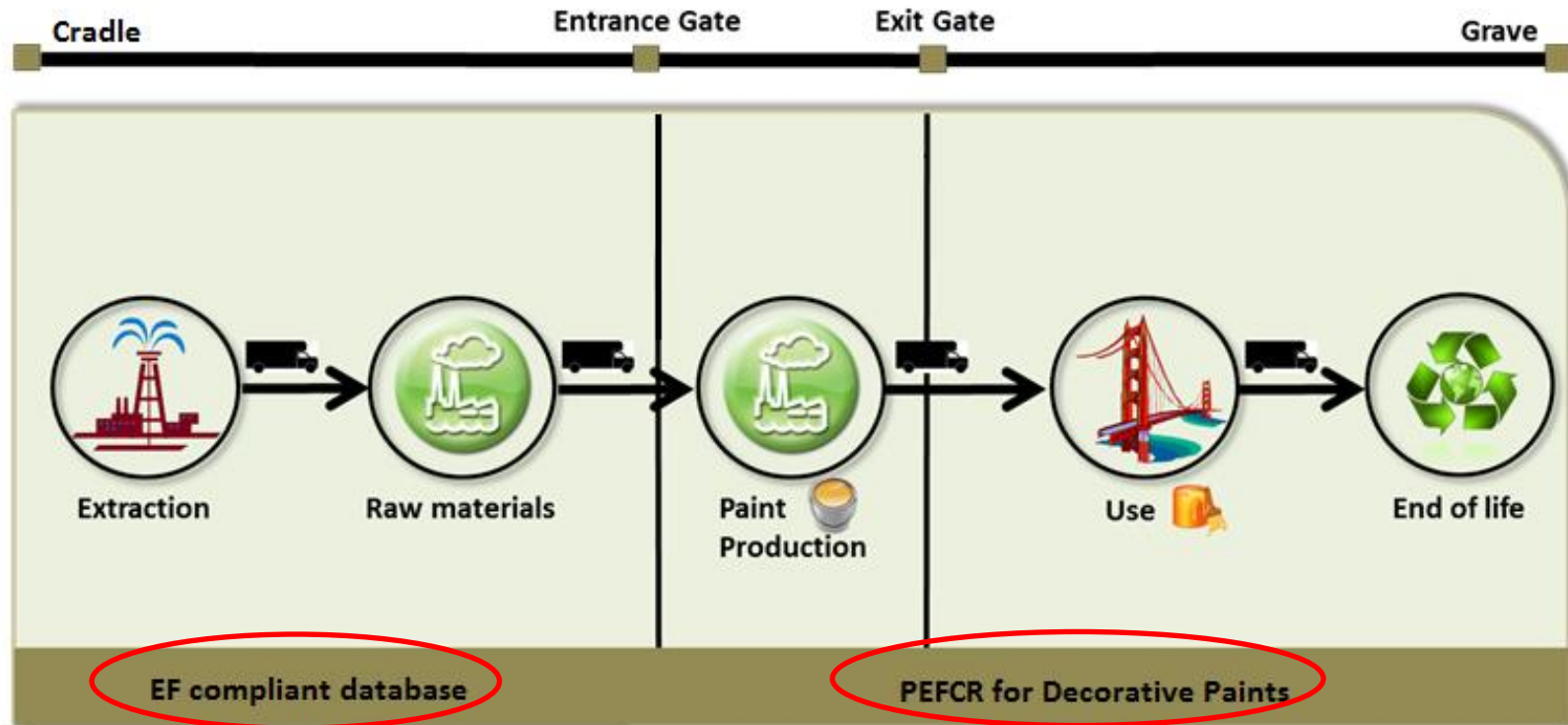
2014: Draft Product Environmental  
Footprint Category Rules (PEFCR)

2016: Supporting studies to test PEFCR  
Second Draft PEFCR  
Decide PEFCR

Test Communication to consumers/professionals

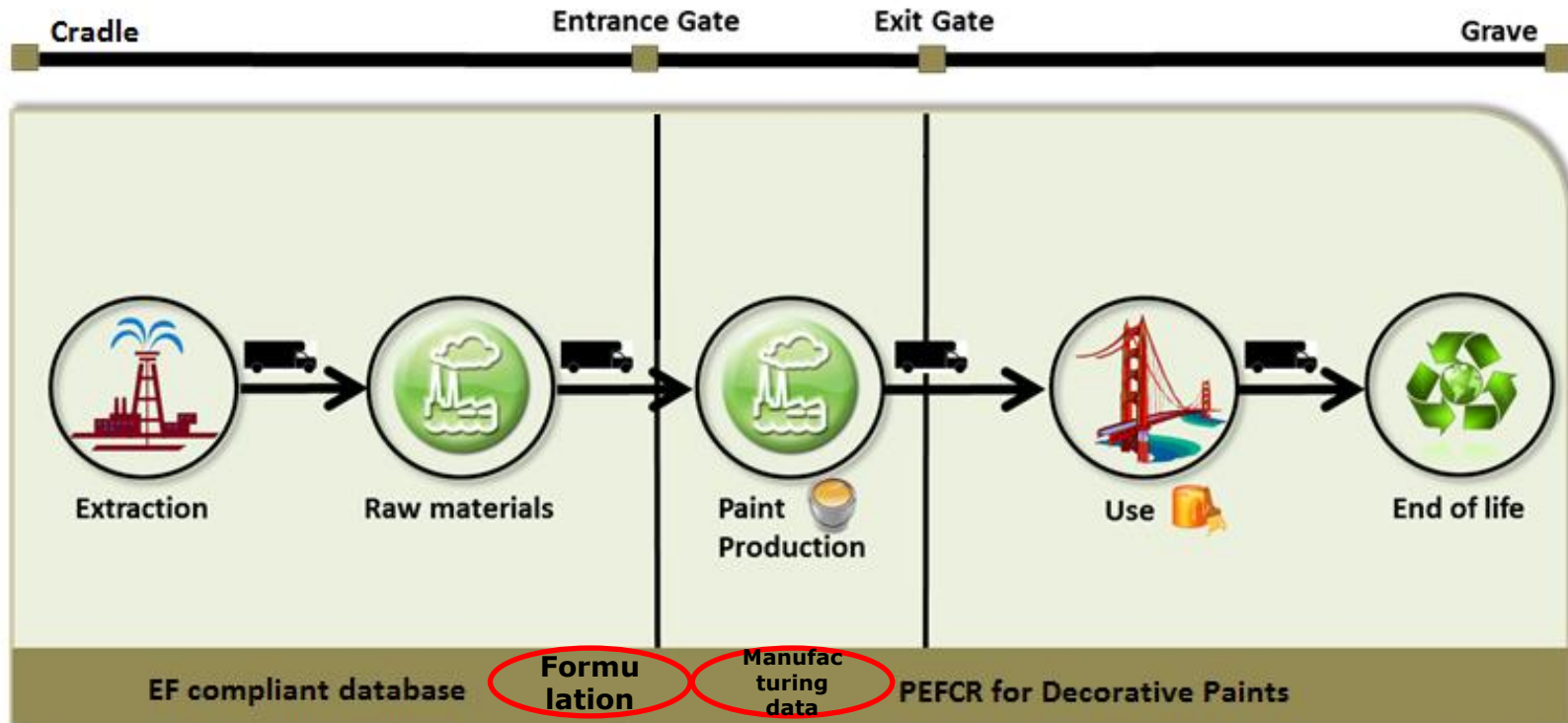


# What do we have with PEF?



- Minimum ILCD requirements for the datasets
- Reviewed by 2 LCA experts
- Data collection processes with company specific information
- Default European scenarios
- Rules for all the users!

# What do we have with PEF?



1. Quality data = Durability
2. Some manufacturing data
3. Formulation
4. VOC/biocides

PEF excel calculation tool

# PEF calculation tool - output

Normalized results	1	2	3	4	5	6	7	
Impact category	RM acquisition	PPM acquisition	RM distribution	PPM distribution	Paint production	Distribution to RDC	Storage in RDC	Distribution to PoS
Acidification	1.69E-12	2.98E-13	1.68E-13	1.01E-14	1.62E-13	2.32E-13	-2.40E-14	2.42E-13
Climate change	1.27E-12	2.73E-13	1.15E-13	6.93E-15	3.13E-13	1.59E-13	3.42E-14	1.66E-13
Ecotoxicity - freshwater	2.96E-13	1.57E-13	9.36E-14	5.62E-15	4.26E-13	1.29E-13	1.44E-13	1.35E-13
Eutrophication - freshwater	9.25E-13	-2.36E-13	6.82E-14	4.09E-15	-1.27E-12	9.38E-14	-1.82E-13	9.82E-13
Eutrophication - marine	5.81E-13	1.56E-13	1.42E-15	8.55E-17	1.14E-13	1.96E-15	-1.89E-15	2.05E-13
Eutrophication - terrestrial	6.91E-13	1.71E-13	2.13E-13	1.28E-14	6.42E-14	2.93E-13	-7.15E-15	3.07E-13
Human toxicity - cancer effects	2.17E-12	1.29E-12	4.56E-13	2.74E-14	4.20E-12	6.28E-13	2.73E-12	6.57E-13
Human toxicity - non cancer effects	2.50E-12	3.38E-14	2.98E-13	1.79E-14	-1.05E-13	4.11E-13	-9.30E-15	4.30E-13
Ionizing radiation HH	2.32E-12	-5.88E-13	8.55E-14	5.13E-15	-2.00E-12	1.18E-13	-2.20E-13	1.23E-13
Land use	1.09E-14	1.16E-14	4.45E-15	2.67E-16	1.24E-15	6.12E-15	3.21E-16	6.41E-15
Ozone depletion	4.27E-14	5.00E-15	7.86E-15	4.72E-16	1.92E-14	1.08E-14	6.96E-16	1.13E-14
Particulate matter	1.13E-12	1.49E-13	8.70E-14	5.22E-15	2.94E-14	1.20E-13	-2.18E-14	1.25E-13
Photochemical ozone formation	1.20E-12	2.88E-13	3.22E-13	1.93E-14	1.18E-13	4.44E-13	-8.78E-15	4.65E-13
Resource depletion - mineral, fossil	2.77E-11	1.01E-13	3.83E-13	2.30E-14	2.56E-13	5.28E-13	4.56E-15	5.52E-13
Resource depletion - water	1.74E-10	2.42E-11	1.01E-11	6.06E-13	-1.24E-10	1.39E-11	-1.37E-11	1.46E-11
Weighted results (PEF Score)	2.12E-10	2.48E-11	1.16E-11	6.94E-13	-1.26E-10	1.59E-11	-1.42E-11	1.67E-11



European Commission

**Environmental impact**

**A B C D E**

**Better Average Worse**



# What is more important as impact?

Climate Change

Water use

Particulate matter

Land use

Resource use, fossils

# Weighting of impact categories

Is based on various criteria:

- Political agenda
- Maturity of the models behind the indicators (often mentioned as robustness)
- Experts' opinion on what is important

# Importance of each Impact Category

- All 16 impact categories are weighted based on importance and aggregate to a total PEF score

Impact Category	Weighting to the Total PEF score (%)
Climate Change (biogenic, land use and land transformation)	22,19
Ozone depletion	6,75
Human toxicity cancer*	0
Human Toxicity non-cancer*	0
Particulate matter	9,54
Ionising radiation, human health	5,37
Photochemical Ozone formation, human health	5,1
Acidification	6,64
Eutrophication, terrestrial	3,91
Eutrophication, marine	2,95
Eutrophication, freshwater	3,12
Eco toxicity*	0
Land use	8,42
Water use	9,03
Resource use, minerals and metals	8,08
Resource use, fossils	8,92

\* Not included temporarily in the weighting of the total PEF score (expected by 1<sup>st</sup> November 2018)

# EU PEF pilot project Decorative paint: Interim phase

PILOT PHASE

INTERIM PHASE



# The way forward: European Green Deal – December 2019





# Green Deal: Circular Economy - July 2020



The Commission will also propose that **companies substantiate their environmental claims** using Product and Organisation Environmental Footprint methods. The Commission will test the integration of these methods in the EU Ecolabel and include more systematically durability, recyclability and recycled content in the EU Ecolabel criteria.

# Green claims

The screenshot shows the European Commission's website for the 'Single Market for Green Products Initiative'. The page header includes the European Commission logo and navigation links. The main content area is titled 'Single Market for Green Products Initiative' and features a sidebar with links to 'Initiative on Green Claims', 'Environmental Footprint transition phase', 'Environmental Footprint pilot phase', 'Communicating to consumers', and 'Questions and Answers'. The main text describes the initiative's goal to help companies market their products as environmentally friendly and mentions a pilot phase where the approach was tested between 2013-2018. It also notes that the 2020 Circular Economy Action Plan foresees that companies will be required to substantiate their environmental claims using Product and Organisation Environmental Footprint methods.

The screenshot shows the European Commission's website for the 'Initiative on substantiating green claims'. The page header includes the European Commission logo and navigation links. The main content area is titled 'Initiative on substantiating green claims' and features a sidebar with links to 'Single Market for Green Products', 'Initiative on Green Claims', 'Environmental Footprint transition phase', 'Environmental Footprint pilot phase', 'Communicating to consumers', and 'Questions and Answers'. The main text discusses the difficulty for consumers to make sense of many environmental labels and initiatives, and mentions that there are more than 200 environmental labels active in the EU. It also notes that the 2020 Circular Economy Action Plan commits that companies will be required to substantiate their environmental claims using Product and Organisation Environmental Footprint methods.

[https://ec.europa.eu/environment/eussd/smgp/initiative\\_on\\_green\\_claims.htm](https://ec.europa.eu/environment/eussd/smgp/initiative_on_green_claims.htm)

# Green Claims and PEF activities

## - End November



DG ENV

**Invitation to stakeholder workshop in the context of  
"Environmental performance of products & businesses – substantiating claims"  
("Green claims initiative")**

**Workshop n° 1 - Communicating green claims**

**Workshop n° 2 - Challenges for companies in substantiating green claims**

**Workshop n° 3 - Reliability of information**

**Workshop n° 4 - Implications of the green claims initiative for ecolabels**

# PEF/OEF: Implications of the Green claims initiative for Ecolabels

1. Only direct compliance: Green claims and ecolabels - provide PEFCR/PEF
2. Indirect compliance: Ecolabels have to carry out one PEF study (if no PEFCR) or use PEFCR to identify hot spots and develop criteria
3. Indirect compliance (with PEFCR): only PEF > PEFCR benchmark to be assessed for Ecolabel (PEFCR to be developed for relevant products)
4. Indirect compliance (with PEFCR): Build on PEF and criteria defined as PEF-based thresholds for most relevant impact categories
5. Combination: 2 (without PEFCR) + 4 (with PEFCR)
6. Exclusion of reliable ecolabels type I (best-in-class labels) from the scope of the Green claims initiative (Ecolabel continues outside Green claim)

# Environmental Footprint



**2021 ? :**  
**Consumers/  
Professionals**



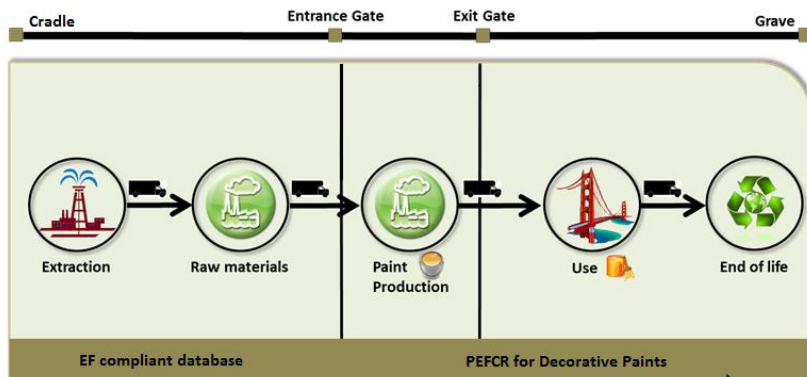
# Environmental Product declaration



**Today:**  
**Buildings**



# PEF: Cradle to grave - 16 environmental impacts

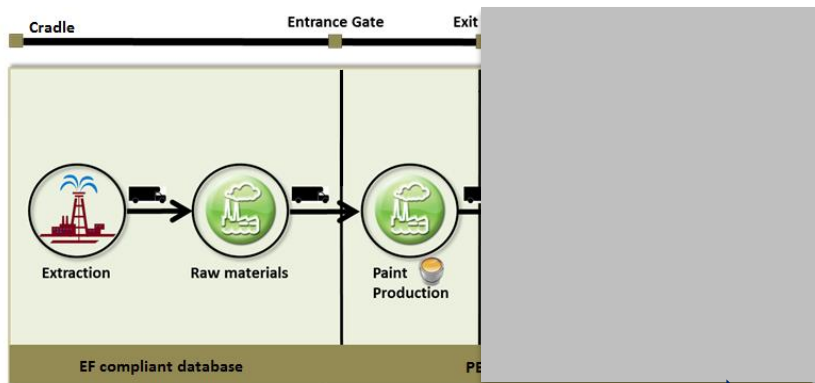


The environmental impacts are weighted to give one PEF score

Compare products covered by PEF

1. Climate Change
2. Ozone depletion
3. Human toxicity cancer
4. Human Toxicity non-cancer
5. Particulate matter
6. Ionising radiation, human health
7. Photochemical Ozone formation
8. Acidification
9. Eutrophication, terrestrial
10. Eutrophication, marine
11. Eutrophication, freshwater
12. Eco toxicity
13. Land use
14. Water use
15. Resource use, minerals and metals
16. Resource use, fossils

# EPD: Cradle to grave (often) - 7 environmental impacts



7 quantified environmental impacts

Only compare own products

1. GWP - Climate Change
2. ODP - Ozone depletion
3. Human toxicity cancer
4. Human Toxicity non-cancer
5. Particulate matter
6. Ionising radiation, human health
7. POCP - Photochemical Ozone formation
8. AC - Acidification
9. EU - Eutrophication terrestrial
10. Eutrophication, marine
11. Eutrophication, freshwater
12. Eco toxicity
13. Land use
14. Water use
15. ADPM - Resource use, minerals and metals
16. ADPE - Resource use, fossils








# LACK OF COMMON GREEN LANGUAGE

PEFCR Decorative Paints – v1.0– April 2018 Page 1 of 84

## Product Environmental Footprint Category Rules - Decorative Paints

Product category: Decorative paints  
Version number: version 1.0  
Date of publication/revision: April 2018  
Date of expiration: December 31<sup>st</sup> 2020



# Circular Economy Action Plan

For a cleaner and more competitive Europe



European Commission

# Environmental impact

## Environmental Product declaration

1

ENVIRONMENTAL PRODUCT DECLARATION

in accordance with ISO 14025, EN 15804 and EN 15959

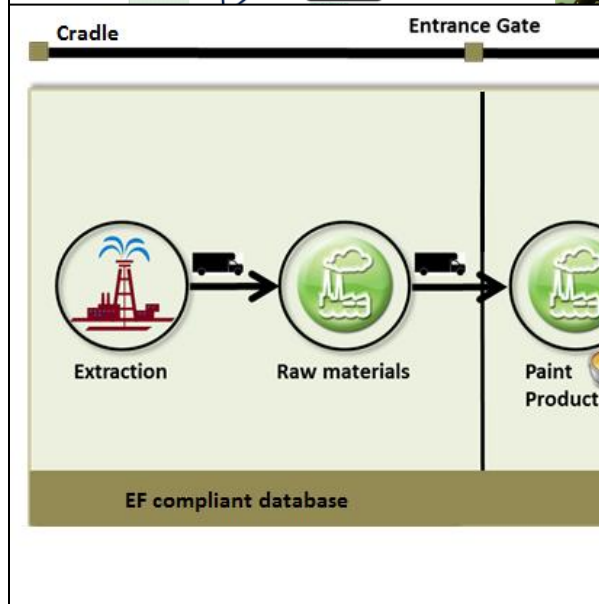
Scope of the declaration:	Jotun AS
Product category:	The Norwegian EPD Framework
Manufacturer:	The Norwegian EPD Framework
Declaration number:	004
Registration number:	001
ISO 14025 reference number:	001
Issue date:	2018-01-01

Jotaproof 07 Hvit base - CopyImport test

Jotun AS

JOTUN







Thank you for your attention !  
Questions ?