

Technical aspects and challenges in the development of Product Environmental Footprint Category Rules (PEFCRs)

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Agenda

- JRC - who we are and what we do
- PEF Category Rules (PEFCR) – technical aspects and challenges
 - ✓ Definition of the scope of a product category
 - ✓ Representative product model
 - ✓ PEF Screening
 - ✓ Draft PEFCR
 - ✓ PEFCR supporting studies
 - ✓ Benchmarks
- Conclusions

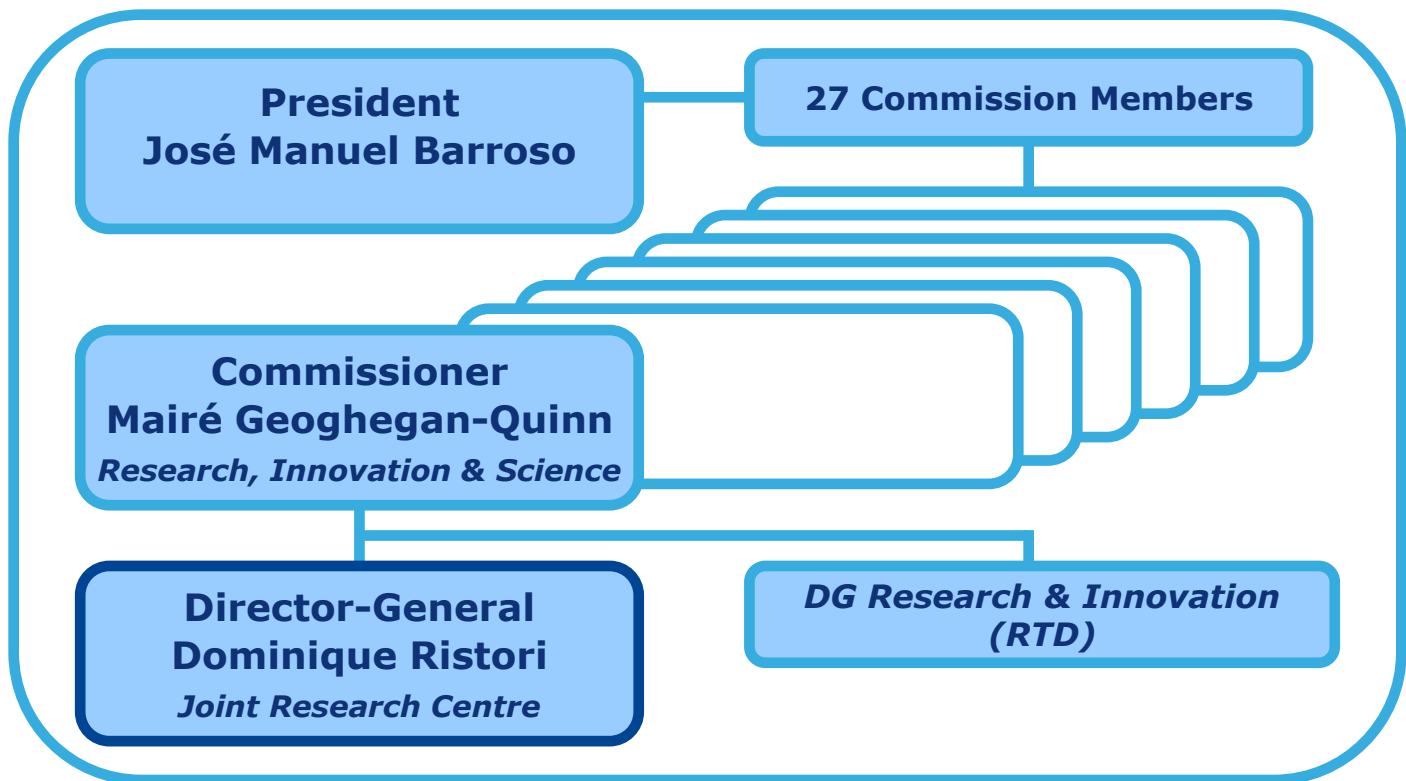
Who are we and what do we do?

The JRC is the European Commission's in-house science service. It provides the science for policy decisions, with a view to ensuring that the EU achieves its Europe 2020 goals for a productive economy as well as a safe, secure and sustainable future.

The JRC plays a key role in the European Research Area and reinforces its multidisciplinary by networking extensively with leading scientific organisations in the Member States, Associated Countries and worldwide.



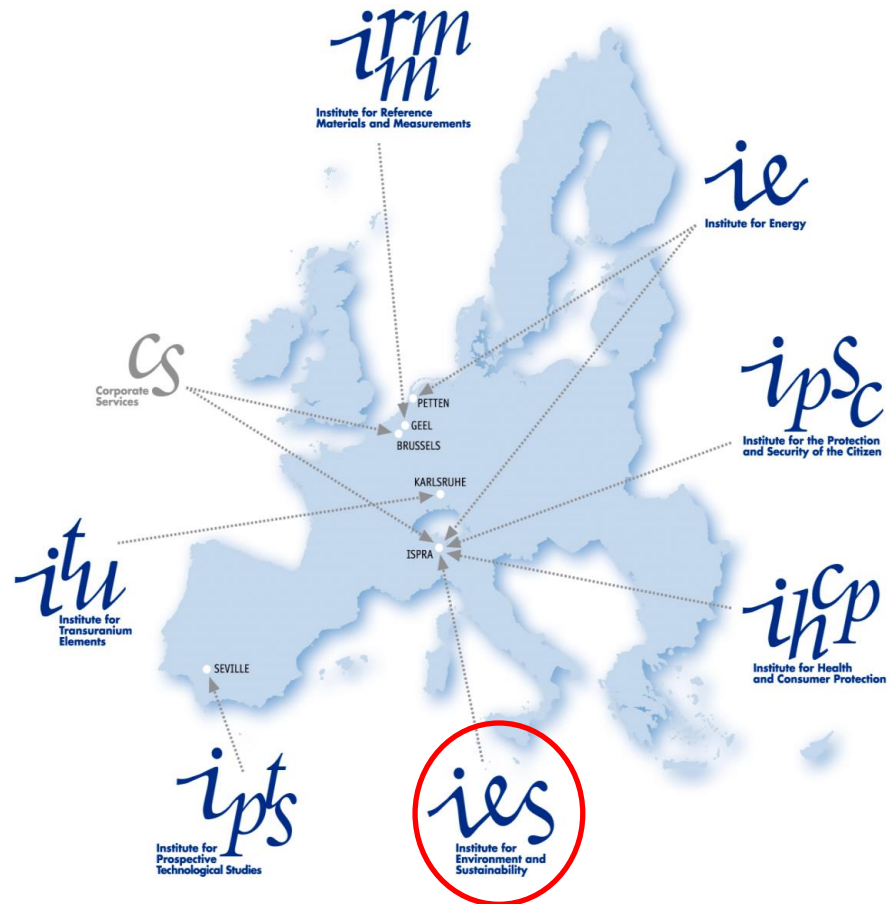
The JRC inside the European Commission



The JRC inside the European Commission

European Commission,
Joint Research Centre (JRC),
Institute for Environment and
Sustainability (IES)

“The mission of the IES is to provide scientific-technical support to the European Union's policies for the protection and sustainable development of the European and global environment”



Definition of the scope of a product category

Classification on CPA/NACE code, but should it be based on:

- **material characteristics** or specific product, e.g. 1kg of plastic, steel, glass (may be necessary for intermediates)
- **Function**, e.g. beverage container for 1 liter, transport of 1 person over 1 km, transport of 1 tonne over 1 km,
- **need**, e.g. housing, food, transport

Definition of the scope of a product category - II

Product 1: A plastic cup

Product 2: A paper cup

Both satisfying the same need and function. But with different life cycle/supply chain.

Should be covered both in the same PEFCR.

But what about the ceramic mug with 100s of uses?

CPA classification - examples

Level Name		Plastic cup (RAMON, 2013)	Ceramic cup (RAMON, 2013)
1st	Section	C MANUFACTURED PRODUCTS	C MANUFACTURED PRODUCTS
2nd	Division	22 Rubber and plastic products	23 Other non-metallic mineral products
3rd	Group	22.2 Plastic products	23.4 Other porcelain and ceramic products
4th	Class	22.29 Other plastic products	23.41 Ceramic household and ornamental articles
5th	Category	22.29.2 Other plastic products not elsewhere classified	23.41.1 Ceramic household and ornamental article
6th	Sub-category	22.29.23 Tableware, kitchenware, other household articles and toilet articles, of plastics	23.41.12 Tableware, kitchenware, other household articles and toilet articles, other than of porcelain or china

Definition of the scope of a product category - III

Challenges

- How to define a product category sufficiently broad to allow meaningful comparisons of different products (with different supply chains behind them)
- How to define a product category sufficiently narrow to remain manageable (also a process question)
- How to ensure consistency of rules for co-products belonging to different categories?
- How to deal with intermediate products?
- How to deal with multi-functionality?

Definition of a “representative” product

- Input:
 - May be based on a real product (decision up to the Technical Secretariat).
 - Can be a virtual product based on average sales
- Expected results:
 - Model of the EU market conditions.
 - Bill of material (BoM).
 - Flow diagram covering the entire life cycle (system boundaries).
 - Assumption on transportation, use and end of life scenarios

PEF Screening

- Objectives:
 - Pre-identification of most relevant life cycle stages and processes.
- Input data (iterative process):
 - Representative product and model
 - PEF Screening according to PEF method as baseline
 - Can in addition be based on existing information/data and top down approaches
 - Feedback and data from stakeholders
- Output:
 - Results are used as basis for the draft PEFCR.

Draft PEFCR

Will provide clear guidance on a range of relevant aspects, such as:

- Goal and scope
- Unit of Analysis and reference flow
- System boundaries
- Resource Use and Emission Profile
- Environmental Footprint impact categories
- Additional environmental information
- Data quality requirements
- Use of secondary data

Draft PEFCR - II

Use of secondary data is to be specified in the PEFCR:

- PEF compliant data from free and public database
- PEF compliant data from commercial database
- Non PEF compliant data from free and public database
- Non PEF compliant data from commercial database

Data and data quality requirement (DQR)

- Specify
 - for which processes the use of generic data is permitted
 - for which processes specific data shall be collected
- Provide further guidance on data-quality assessment scoring related to
 1. time representativeness
 2. geographical representativeness
 3. technological representativeness

PEFCR supporting studies

At least 3 PEF studies of real products conducted/led by participants, stakeholders

- Based on PEF and final draft PEFCR requirements
- Comprehensive coverage of life cycle stages, processes and impact categories
- Normalisation and weighting to be included

- Expected outputs:
- Final identification of most relevant life cycle stages and processes.
- Final identification of most relevant impact categories
- Support benchmarking

How to identify benchmarks

Input

- Based on at least 3 PEFCR supporting studies (PEFs) and the earlier PEF screening
- Expected results:
 - Identify uncertainties common to the product category.
 - Identify ranges of PEF results that can be seen as insignificant differences.

Option: Probably to be agreed by the Pilot Steering Committee?

PEFCR review

- Panel of (at least) 3 qualified reviewers
- preferably 1 NGO, industry and Commission

To be checked:

- Is the PEFCR in line with guidelines for development of PEFCRs and the PEF?
- Are selected Impact categories and additional environmental information appropriate?
- Are all significant environmental aspects of the category reflected?

Result:

- Technical Secretariat to respond to comments
- In case of disagreement: decision at PEF Pilot Steering Committee level

Conclusions

- Role and objectives of PEFCRs:
 - Increase relevance, robustness, consistency & comparability within a given product category
 - Increase efficiency by reducing time, effort and costs for conducting PEF studies
- Approach to realise the objectives:
 - Directing the focus on the most important parameters:
 - Processes/activities to be included (system boundaries)
 - Define downstream scenarios (use, transport, end of life)
 - Impact categories and additional environmental information
 - Further specifying data and data quality requirement as relevant





European Commission

Thank you for your attention!

Questions?

Further links and contact:

JRC website:

<http://ec.europa.eu/dgs/jrc/index.cfm>

IES website:

<http://ies.jrc.ec.europa.eu/>

Sustainability Unit (H08) website:

<http://ies.jrc.ec.europa.eu/the-institute/units/sustainability-assessment-unit.html>

LCA/LCT website:

<http://lct.jrc.ec.europa.eu/>

Environmental Footprint guides:

http://ec.europa.eu/environment/eusssd/product_footprint.htm

Email:

LCA@jrc.ec.europa.eu

The screenshot shows the homepage of the 'Life Cycle Thinking and Assessment' website. At the top, it features the European Commission logo and the text 'European Commission - Joint Research Centre Life Cycle Thinking and Assessment Institute for the Environment and Sustainability'. Below this is a navigation bar with 'Thinking' and 'Assessment' tabs. The main content area is divided into several sections: 'Our thinking - life cycle thinking' which includes a circular diagram of the life cycle stages (Manufacturing and Retail, Design, Resource Extraction and Processing, Distribution, Use, Collection, Re-use, Repairing, Energy Recovery, Disposal) and a text block explaining LCT; 'Shortcuts' with links to 'Life cycle indicators framework and reports', 'JRC Reference Report on LCA Handbook online', 'LCIA Characterisation Factors', and 'EcoDesign Project Stakeholder Consultation'; 'Our common goal - sustainable consumption and production' with text about consumer awareness; and 'Life cycle thinking in European Policy' with a bullet point about the Sustainable Consumption and Production Action Plan. A right-hand sidebar contains 'News' and 'Waste guidelines Projects'.

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