



LCA: Feedback from the non-ferrous metals producers and recyclers in Europe

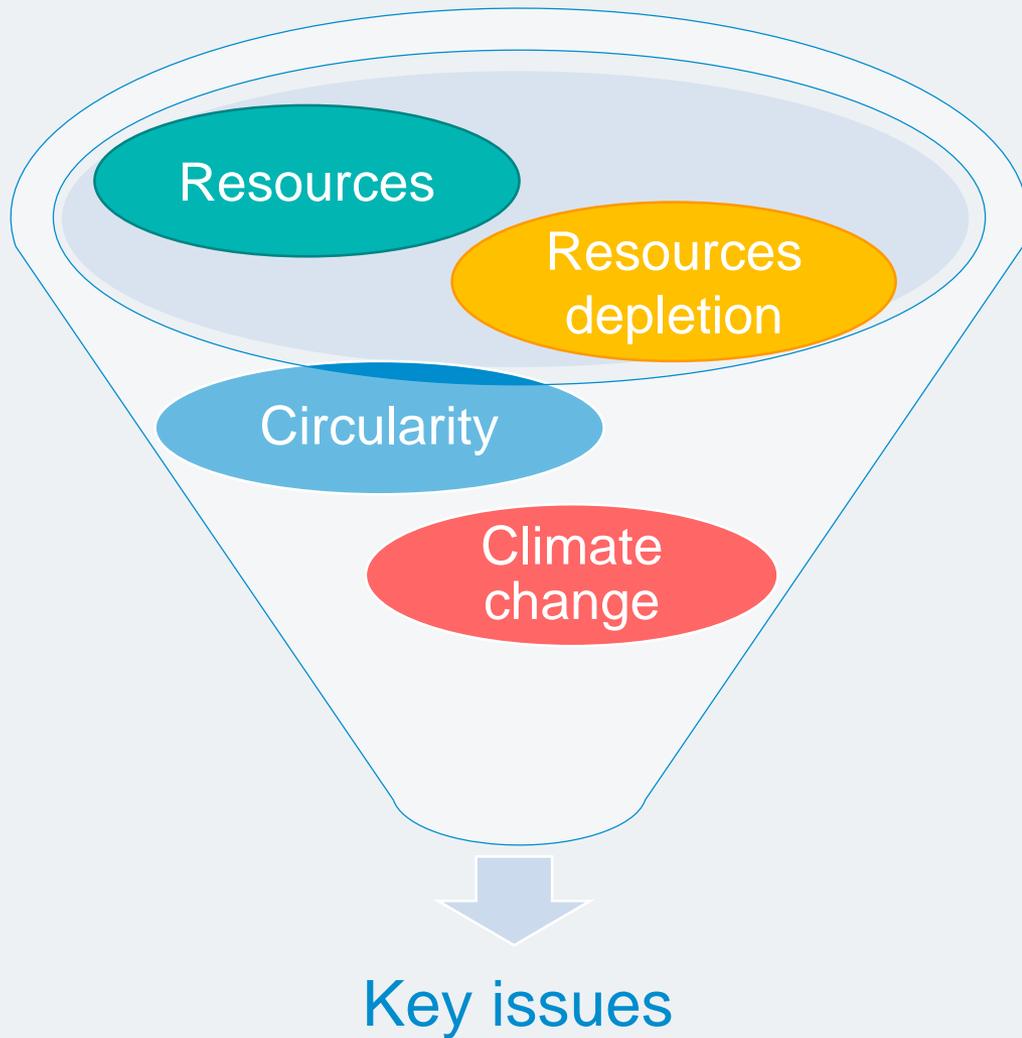
SUPRIM Final Conference
Brussels, 22nd October 2019



On the programme today

- 1 **LCA methodology: Environmental Footprint & SUPRIM**
- 2 **LCA in policy making perspective**
- 3 **Conclusions**

The bigger picture



Environment-conscious public



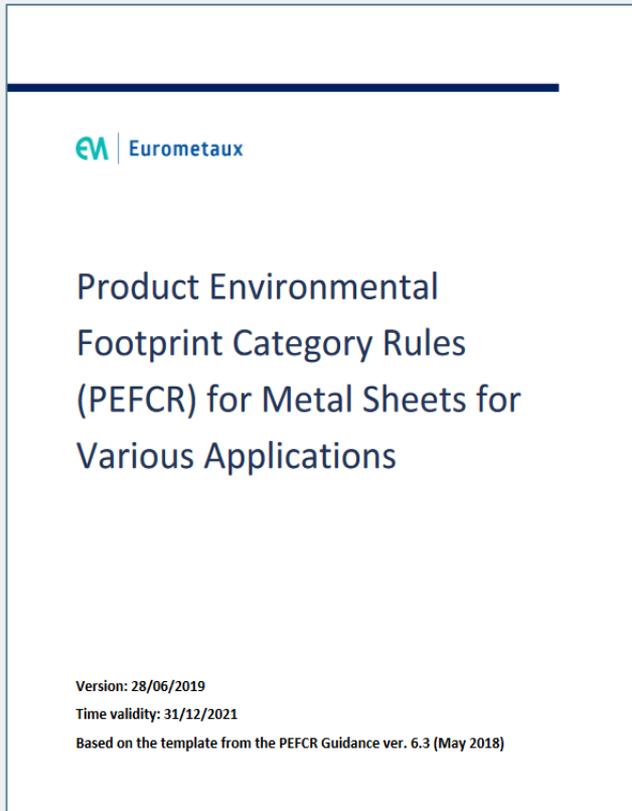
Ambitious European Commission

LCA methodology: current practice



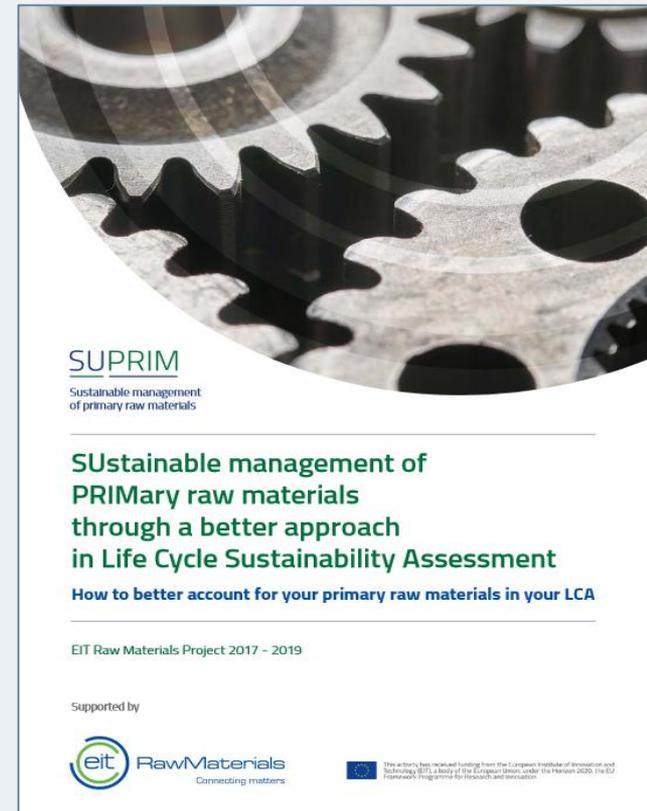
Environment Footprint Methodology

Pilot Phase (2013 – 2018)



EIT Raw Materials Project 2017 – 2019

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Life Cycle Assessment



→ Made to evaluate environmental performance

→ Since 2002 LCA includes Abiotic Depletion Potential (ADP)*

↓
Increasing use of the ADP by LCA community and regulators to evaluate the use and future availability of materials

* *Institute of Environmental Sciences (CML) at Leiden University, Guinée et al., 2002*

LCA methodology: ADP & metals

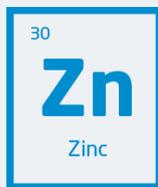
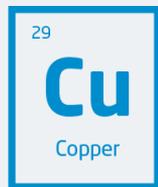
- ADP has produced very high scores for some metals
 - *Contradiction to metals' circularity image!*
- 2018 project by the Leiden University included updated crustal content factors for metals
 - *Changes are not yet included in the Commission's Environmental Footprint methodology*
- All metals need to be balanced for every single unit operation
 - *Missing point in today's LCA practice*

Future resource availability for metals needs to consider recycling as well as any losses in the value chain

ADP under Commission's Environmental Footprint method



Resource depletion (fossil, mineral) → dominating impact category for different metals when applying the current method 'ADP crustal content' for assessing minerals & metals and current normalisation factors



primary and
secondary
production



**interpret the results
with caution**



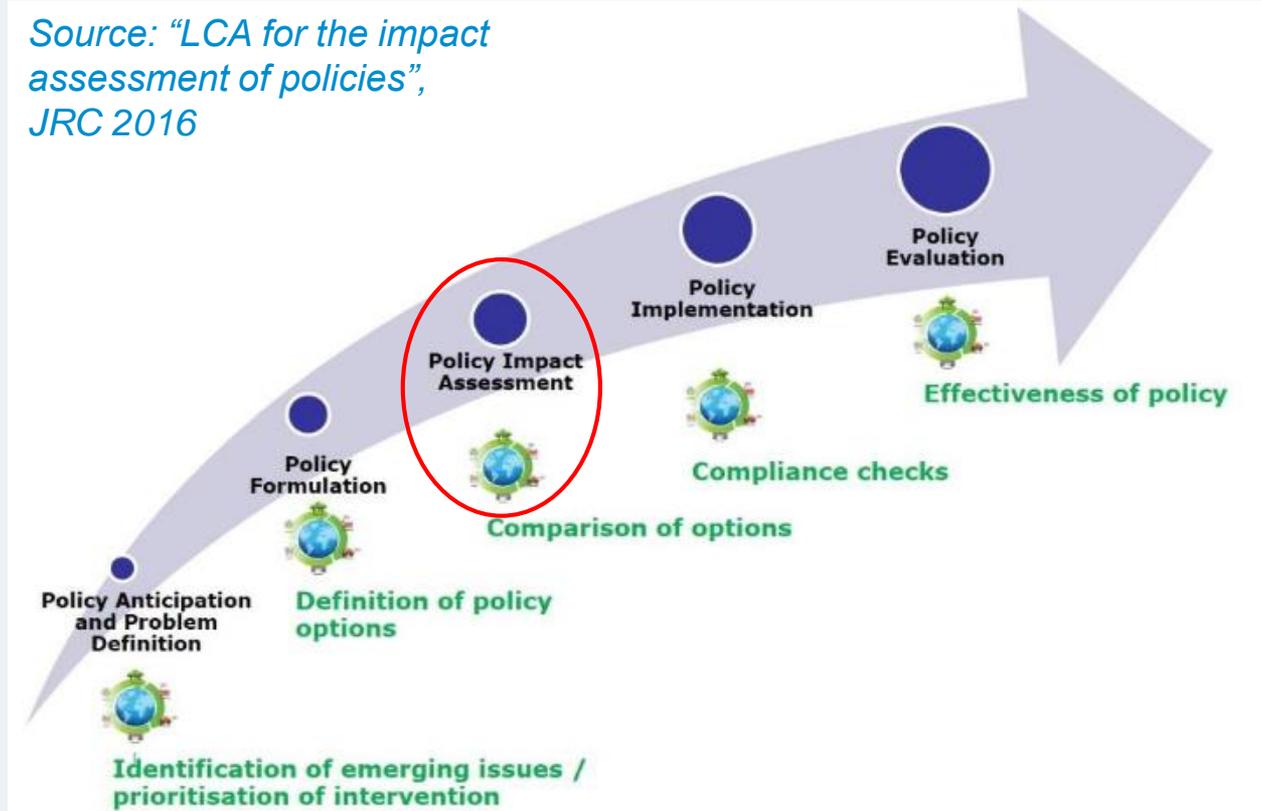
PEF Pilot Phase (TAB conclusions):

- ADP reserve base replaced temporarily by ADP crustal content
- ADP crustal content normalisation factors must still be updated
- The **Commission** to develop, **in cooperation with industry**, a new method, moving from depletion to dissipation model

!! Instead, Commission and industry are developing separate projects !!

LCA in policy making perspective

Source: "LCA for the impact assessment of policies", JRC 2016



5 steps of
policy cycle
& possible
use of LCA

JRC report conclusions:

- LCA has been integrated in the main EU environmental policies
- **LCA in the policy cycle is the most useful at the impact assessment stage** (analysis in relation to energy, climate and environment)

LCA in policy making – Products in a Circ. Economy

Preparatory study for solar PV modules

- *Done by JRC*
- *PEFCR on PV modules = one of the study's sources*

Study on sustainability requirements for rechargeable batteries

- *Done by the EC*
- *PEFCR on batteries = one of the main sources*

Current uses of EF methodology in EU policy*

EN 15804 standard

- *EC issued a new mandate to CEN to amend the standard to make it more consistent with PEF & to iron out methodological issues*

EU Sustainable Finance Action Plan – taxonomy

- *EC is exploring the possibility to use EF methods to in defining taxonomy criteria*

**Sustainable Products in a Circular Economy – Towards an EU Product Policy Framework contributing to the Circular Economy (SWD(2019) 91)*

Conclusions

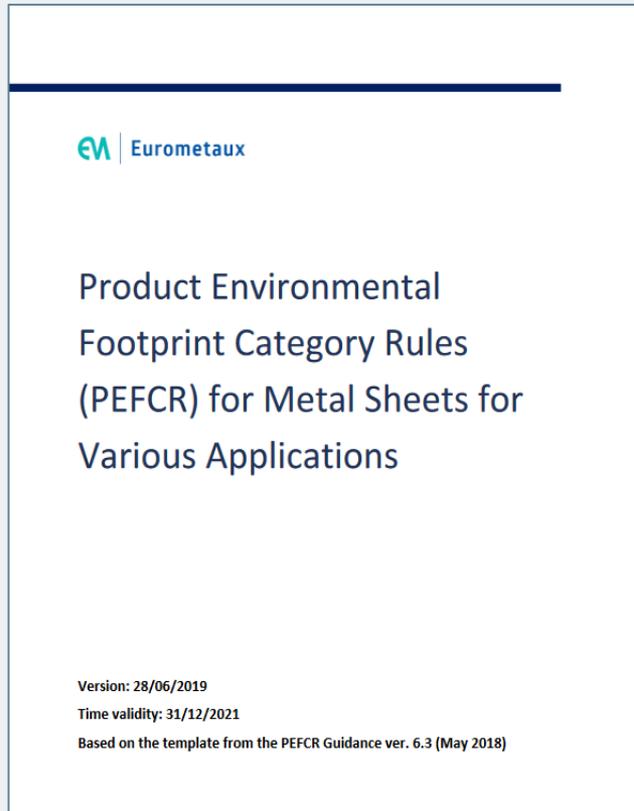


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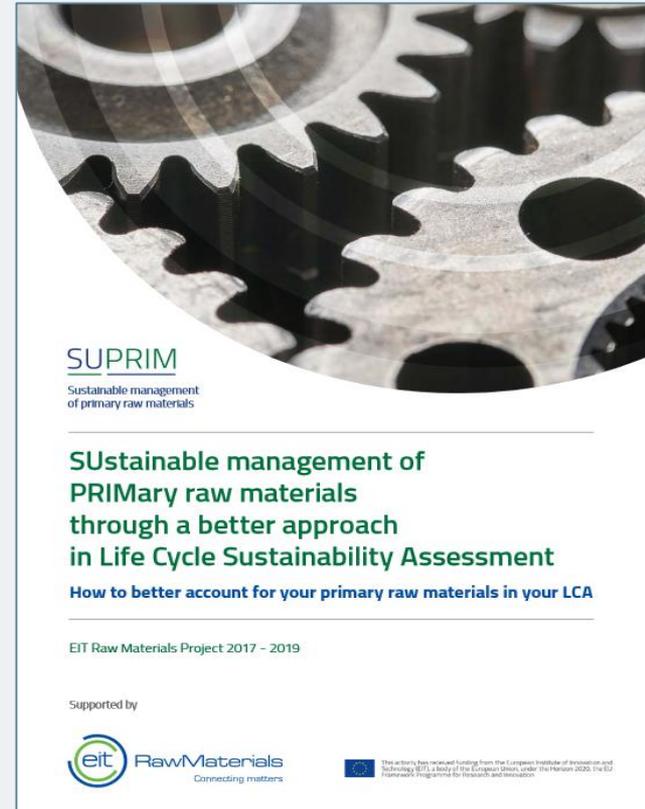
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Conclusions (1):

EF and its place in the product policy



COMMISSION'S INTENTIONS:

Explore possible uses of PEF to measure and to communicate environmental performance

Explore different options for integrating PEF in the product policy



Joint Metals and Mining Industry position (01/2019)

- EF methodology needs to be further developed before used for decision making.
- Specific focus should be given to improvements to toxicity, ecotoxicity and resource use
- The Commission should work with stakeholders to revise shortcomings defined during the PEF Pilot Phase to make the methodology robust

Conclusions (2)

SUPRIM project has:

- initiated an interest in finding a methodology better suited to reflect the character of metals (primary production, use, recycling);
- contributed in convincing the Commission to improve the Env. Footprint methodology during the PEF transition period (2018 – 2021);
- helped to understand the real information needs behind the concerns of regulators and designers;
- initiated development of an improved methodology via the joint industry Abiotic Resource Project (ARP)

THANK YOU

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