

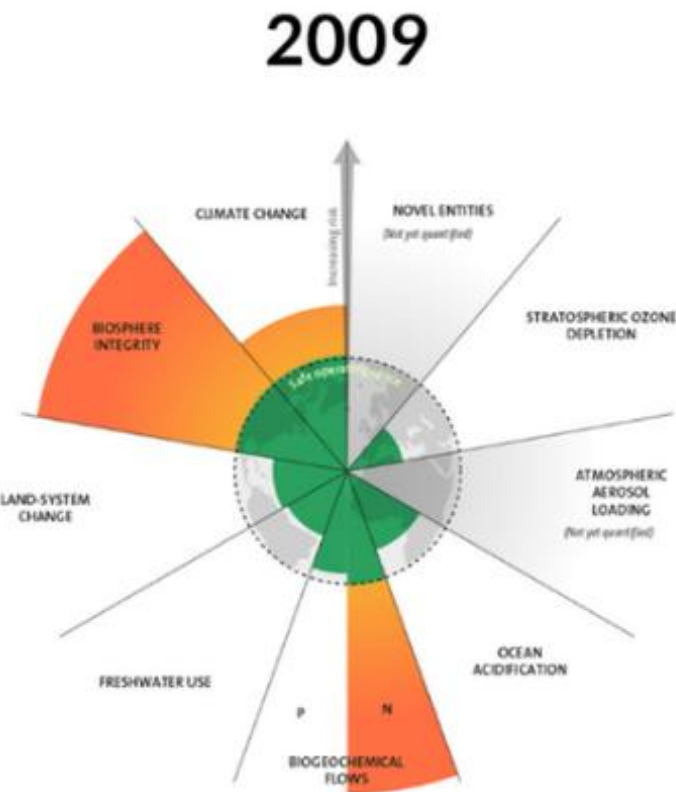


13 September 2025 - Palermo, Italy

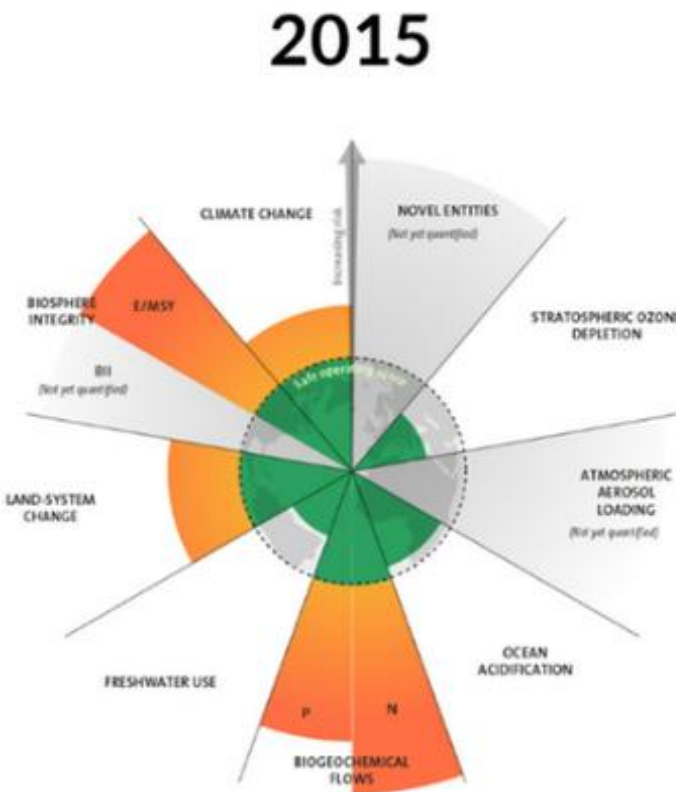
**Mauro CORDELLA**  
European Commission, DG Environment



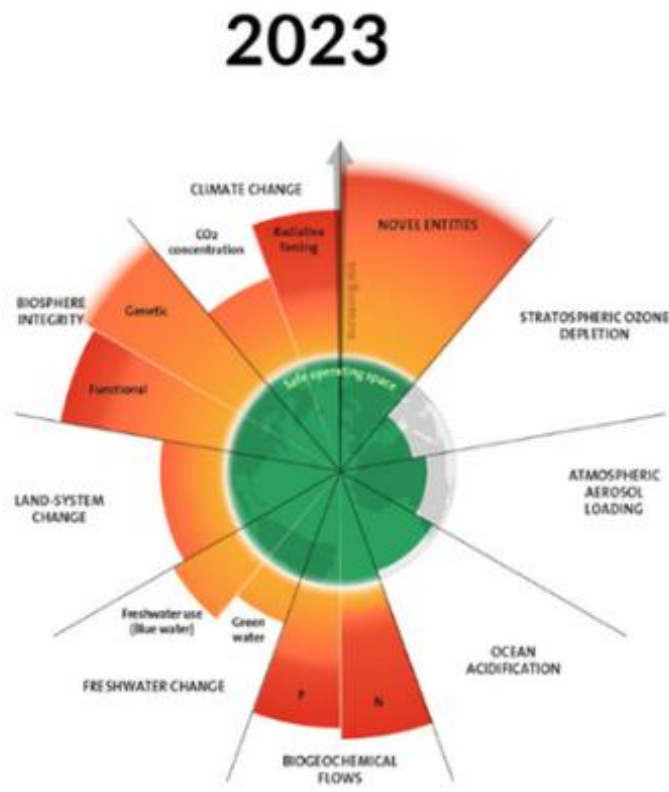
# We live in times of multiple global crises



7 boundaries assessed,  
3 crossed



7 boundaries assessed,  
4 crossed



9 boundaries assessed,  
6 crossed

# Life Cycle Assessment is (part of) the answer



- Analysis (and reduction) of **environmental impacts**, trade-offs and burden-shifts
- Address other **sustainability** aspects
- Several **uses**
  - Eco-design and value chain management
  - Research & Innovation
  - Reporting/communication
  - Policy making



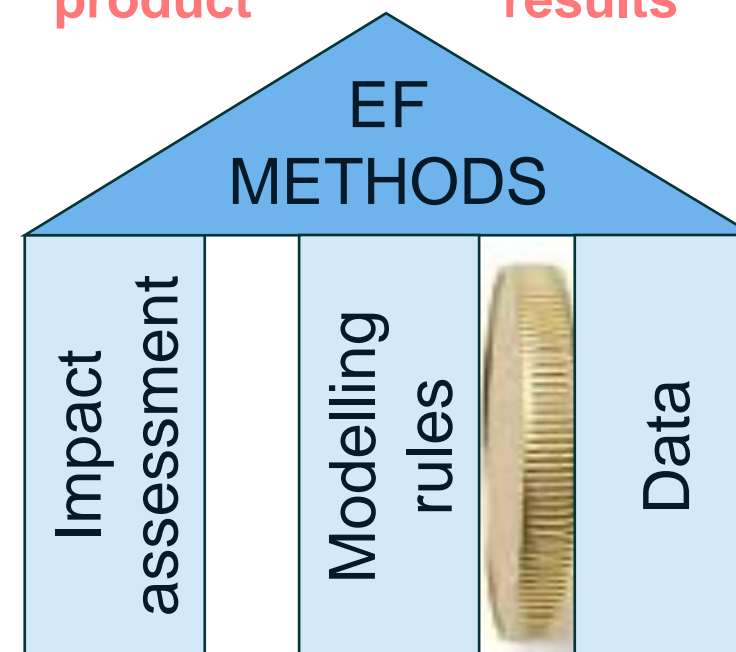
Life Cycle Assessment is (part of) the answer



Same  
product



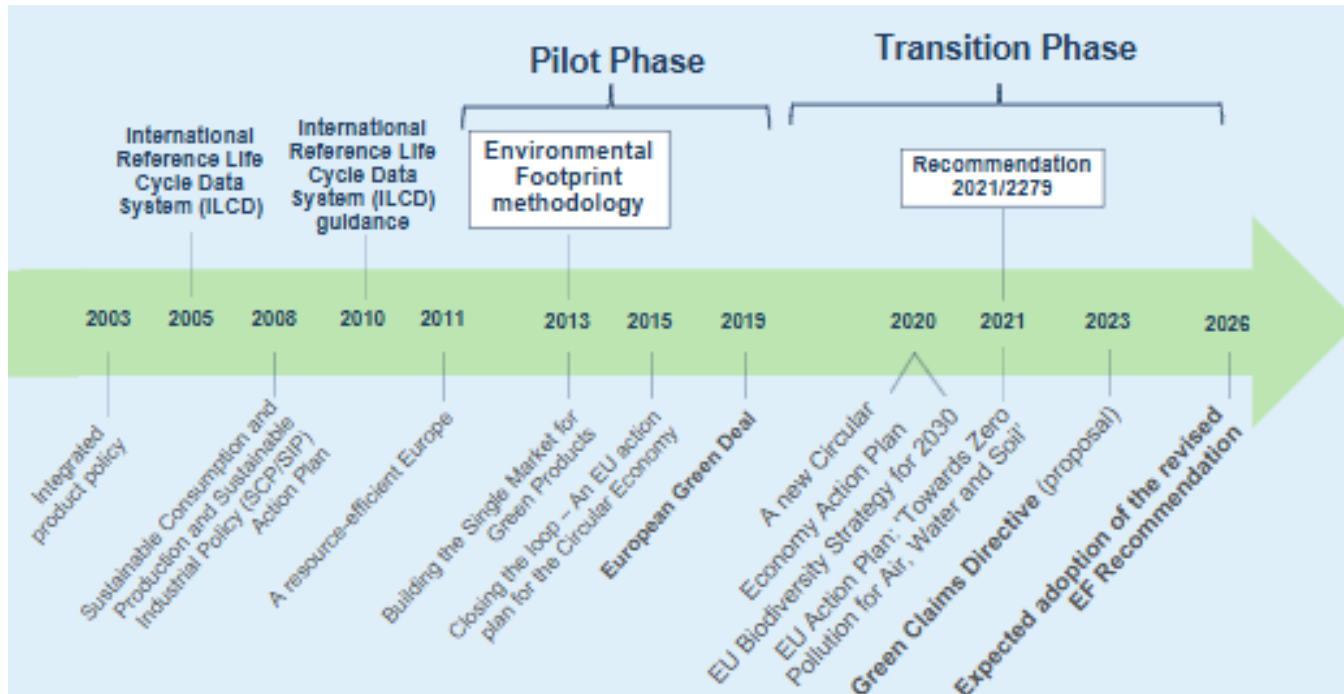
Different  
results





# Environmental Footprint methods

- **Recommendation (EU) 2021/2279** to harmonise LCA of products (PEF) and organisations (OEF) and make them fit-for-purpose
- Consolidated **multi-stakeholder processes**
- **Broad application** from agrifood to space
- Used for **EU legislation** on carbon/environmental footprint





### New PEFCRs (in 2024-2025)

1. Aquaculture and marine fish
2. Apparel & Footwear
3. Cut Flowers and potted plants
4. Synthetic turf

### Updated PEFCRs/OEFSRs (in 2024-2025)

5. Beer
6. Copper (OEFSR)
7. Dairy products
8. Feed for food-producing animals
9. Pet food
10. Batteries (tbc)

### Other PEFCRs (in 2026-2027):

11. Aircrafts, drones and VTOL (EASA, tbc)
12. Space (DEFIS)
13. Tourism (GROW)

### “Shadow” PEFCRs:

- Developed by industry independently from EC
- Could be reference for further developments, incl. EF processes and policy uses

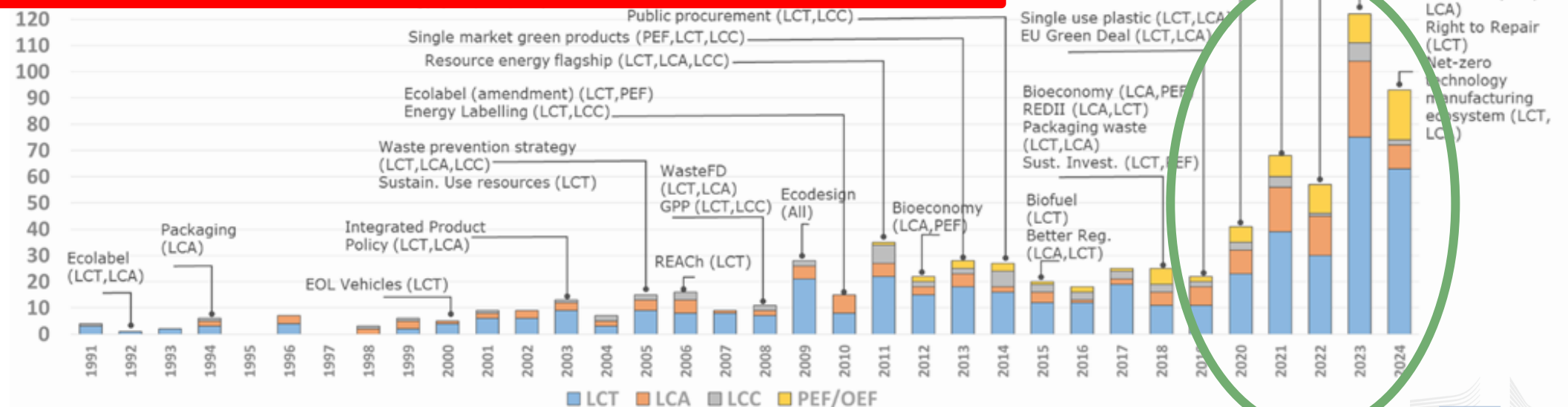


# LCA / LCT in EU policies

EU GREEN DEAL  
(2019-2024)

## Clean Industrial Deal (2025):

- Confirms relevance of comprehensive LCA methods (e.g. Batteries, CRMA, ESPR, CPR)
- Highlight simplification and harmonisation needs
- Start focusing on carbon accounting and integration with ETS/CBAM



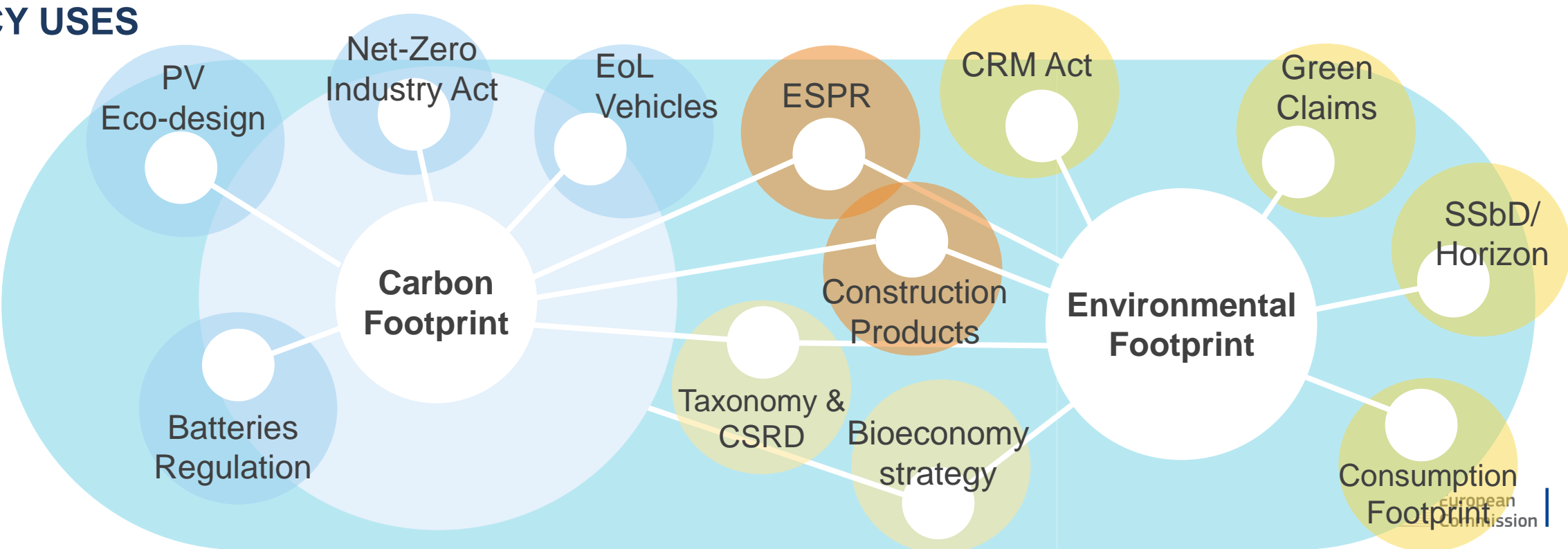
Updated from Sala et al. (2021). The evolution of life cycle assessment in European policies over three decades. *The International Journal of Life Cycle Assessment*, 26, 2295-2314.



POLICY DEVELOPMENT



POLICY USES

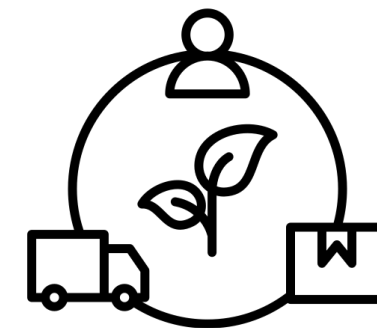






# Ecodesign for Sustainable Products Regulation

- Entered into force in 2024
- LCA/EF as key tool for:
  1. Analysis and prioritisation of product groups
  2. Methodology for the analysis of impacts and hot-spots of product options
  3. Potential performance and information requirements
- Original MEErP complemented with EF and additional elements
- PCF building on EF, ETS and CBAM
- 2025-2030 Working Plan published in 2025:
  - Iron&steel (2026), Aluminium (2027)
  - Textiles (2027), tyres (2027), furniture (2028), mattresses (2029)
  - Repairability (2027), Recycled content and recyclability of EEE (2029)



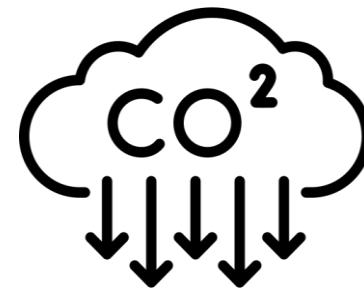


## Construction Product Regulation – EN15804

- Entered into force in 2025 and progressively replacing Reg. (EU) 305/2011
- Development of technical frameworks for declarations, requirements and information provision
- EN15804 as methodological reference for LCA/EPD
- Converging tracks to ensure consistency across products and materials
- Building block for CF under EPBD



## ETS - CBAM

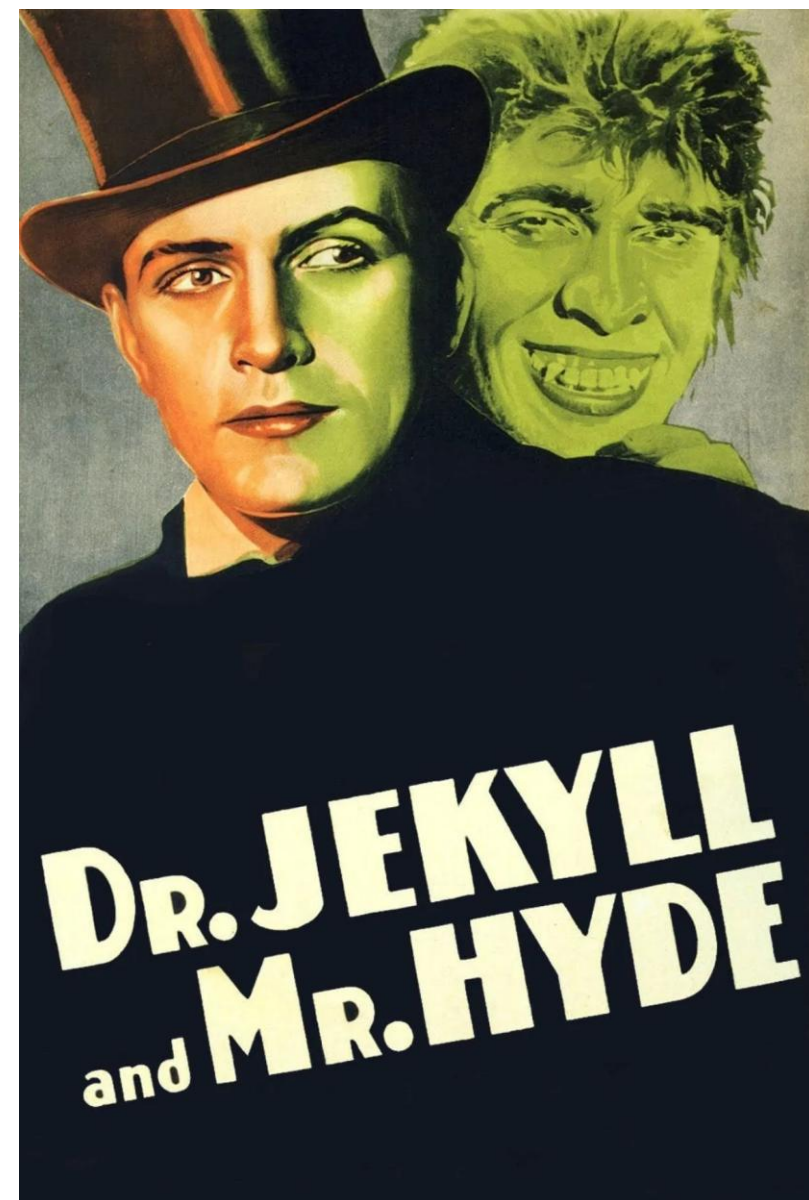


- As the EU raised its own climate ambition (e.g. via the **Emission Trading System** - ETS), and as long as less stringent climate policies are deployed in other countries, there is a **risk of 'carbon leakage'** (i.e. EU production moved abroad, or EU products replaced by more carbon-intensive imports).
- **Carbon Border Adjustment Mechanism (CBAM)** applies to a large set of products when imported, transitional period until definitive in 2026
- **LCT approach** (currently under definition / refinement) implementing default values and reporting rules
- Accounts for selected **Scope 1 and Scope 2 GHG emissions** (Scope 3, partly)
- Expected to become **reference** for future policies on carbon footprint accounting, such as the **Industrial Decarbonisation Accelerator Act**:
  - Accelerate permitting for clean industrial projects.
  - Introduce voluntary EU-wide carbon labels, starting with sectors like steel, to help create lead markets for low-carbon products



## LCA needs/challenges for policy making:

- 1** **Fitness-for-purpose** vs. limitations of LCA
- 2** **Data** availability, reliability and reuse
- 3** **Simplification** vs. scientific complexity
- 4** **Harmonisation:** copy-paste vs. convergence





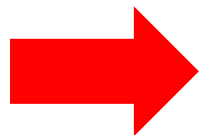
## Strength, agility and flexibility needed





# Priorities for the future of LCA/EF methods

1. **Methodological developments** to fulfill policy needs (e.g. Green Claims Directive proposal)
2. Pursue **coherence, consistency and harmonization** (e.g. carbon footprint)
3. **Mainstream the implementation**
  - Address SMEs, use in EU policies and other applications
  - Provide rules, data, tools, training



- **Review EF Recommendation**
- **EF datasets**

# Methodological developments



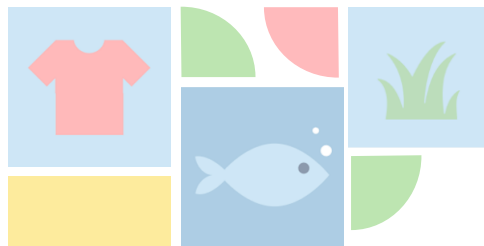
**Based on policy needs, scientific progress, in-house experience and external input, including:**

- Revision / update of existing **midpoint impact categories** (e.g. water, soil quality, resources, toxicity)
- “-1/+1” hybrid approach for biogenic C accounting
- New categories for **microplastics** and **biodiversity**
- Revision of **DQR and other modelling aspects** (e.g. EOL, circularity, agrifood, allocation, electricity, mass balance)
- Adjustment of **normalization, weighting and aggregation**
- Integration of **non-LCA information** (e.g. fish depletion)
- Setting the ground for **longer-term developments** (e.g. endpoint indicators, cLCA elements, link with PB)



# Mainstreaming EF/LCA

## Reducing difficulties



- Simplification and harmonisation
- Text of EF Recommendation
- PEFCR/OEFSR
  - Streamline procedures (currently: ~M1€, 2.5 years)
  - Focus on policy priorities (e.g. ESPR)
  - Umbrella and shadow PEFCRs

## Easing implementation

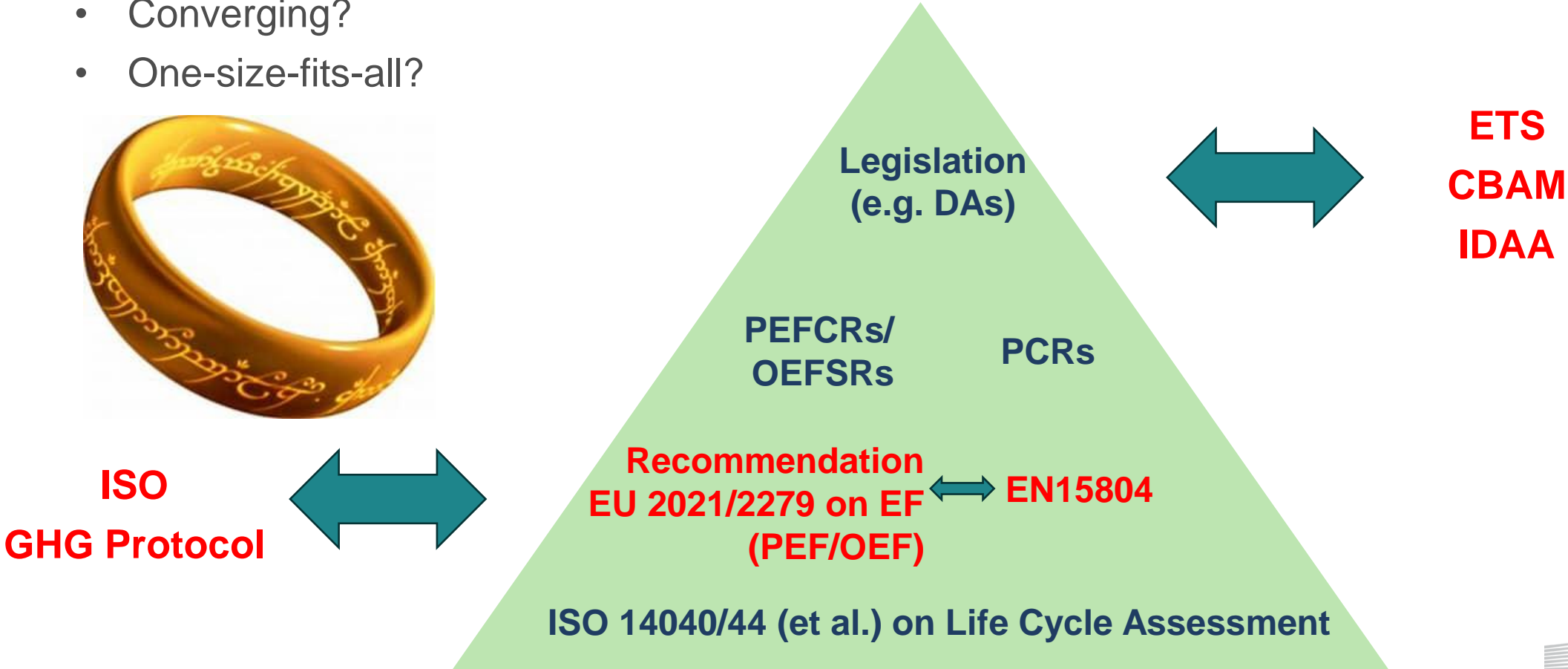


- Data
- Tools
- Training



# The harmonisation challenge: LCA & carbon accounting in the EU

- Reproducing?
- Converging?
- One-size-fits-all?



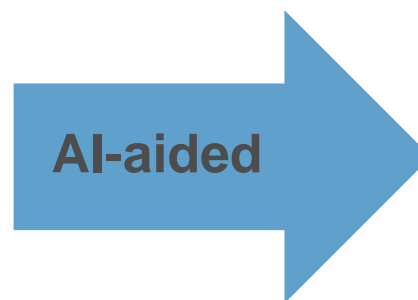




## A vision on data



**Multiple data points**  
(admin burdens, risk of inconsistencies)



- Data interoperability
- Integration
- Harmonisation



**Future:** one common  
database/network



# KEY TAKEAWAYS

1. The maturity age of LCA/EF/EPDs and **the moment of “truth”**
2. What does “successful” mean? Accessible, **good LCA** needed
3. **EU policy framework as global reference** (e.g. ESPR, CPR, CBAM, Batteries) + other emerging players appearing
4. Better **carbon footprint** today, or **environmental footprint** tomorrow?
5. **Find balance of contrasting needs**: harmonization, simplification, scientific coherence, operationality, political winds
6. **Collaboration and exploitation of synergies** is fundamental (e.g. data, PCRs)
7. **LCA for sustainability, and peace?**

# KEY TAKEAWAYS

***“Hope is not the conviction that something will turn out well  
but the certainty that something makes sense,  
regardless of how well it turns out”.***

***Vaclav Havel***

*(from the book “Radical Love”, written by Satish Kumar)*

# THANK YOU!

**ENV website:** [Environmental Footprint methods](#)

**JRC website:** [European Platform on LCA \(EPLCA\)](#)

**EF TAB:** [Register of Commission expert groups](#)

**Circular economy:** [Circular economy](#)

**Green claims:** [Green claims](#)



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# 2024-2029 Commission’s priorities

- 1. Sustainable prosperity and competitiveness
- 2. Defence and security
- 3. Supporting people and the social model
- 4. Quality of life: food security, water, nature
- 5. Protecting democracy and values
- 6. Global Europe: power and partnerships
- 7. Delivering together & preparing for the future

# LCA/LCT potential contribution

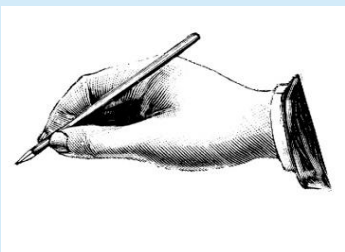
- a. Supports **reducing waste, cost inefficiencies and impacts** of products and organisations
- b. Promotes **environmental excellence and sustainable innovations** and investments
- c. Supports **resilience** of value chains (e.g. CRM)
- d. Promote **transparency, reliability and trust** (e.g. green claims, data)
- e. Supports **fair trade agreements and leadership** in sustainability
- f. **Breaks silos and helps monitor progress** toward climate neutrality, circular economy, and resilience





# Governance of EF methods & development of PEFCRs

**TS**



**Technical Secretariats**

1 per PEFCR/OEFSR

Develops sector rules

Manages the project

**TAB & SG**



**Technical Advisory Board  
+ Steering Group**

Provides technical and policy  
advice for development and  
implementation of EF



**European Commission**

Guardian of the method

Final decisions

Support



**Helpdesk**

Provides technical  
support to stakeholders



**Stakeholders**

Follow developments  
Comment, Input on  
public consultations

European  
Commission

# Potential data links

Work in progress

