LCA4Regions
Interreg Europe

European Union
European Regional
Development Fund

# LCA in EU policies and in Regional GPP

Fritz Balkau
TLJ4
27 May 2021

# Content

**What is sustainability ?**

**What is the LCM toolbox ?**

**How is EU policy based on LCT and LCA ?**

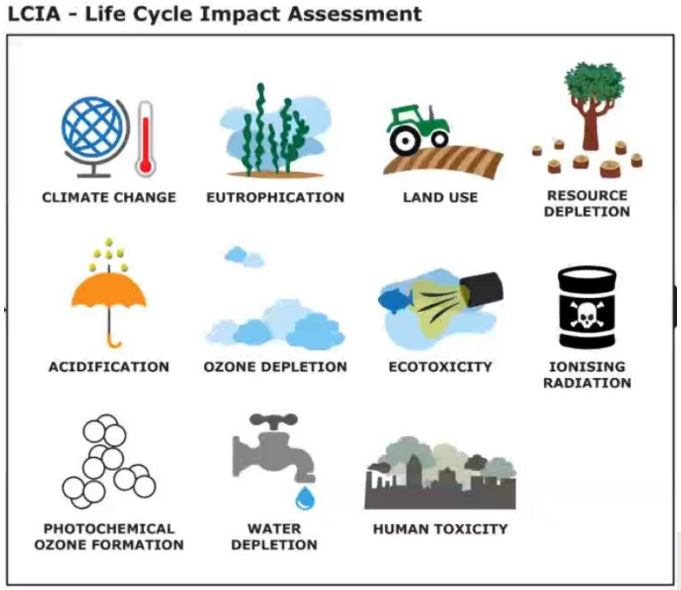
**EU and GPP**

**LC tools for GPP**

**Next steps**

# The role of LCA in sustainable development

# Visions of Sustainability




**Moving the focus from consideration of unwanted impacts to a vision of desired outcomes**

# Sustainability metrics

## depend on several conceptual procedures :

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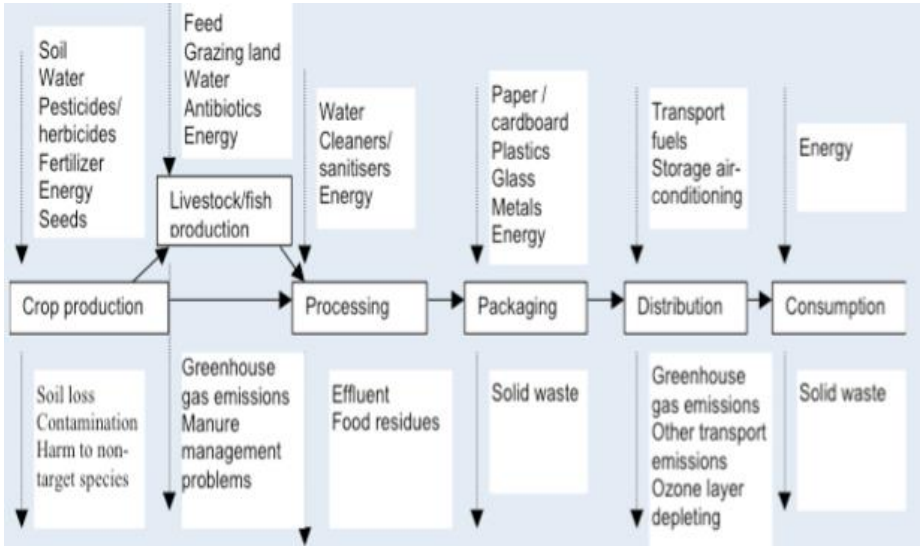
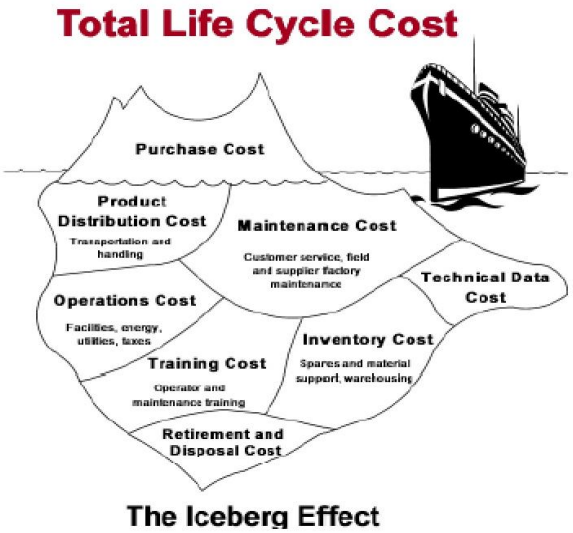
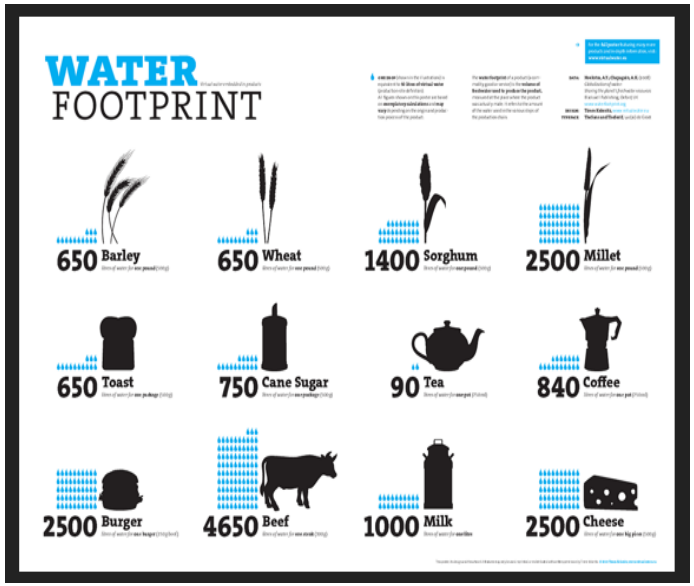
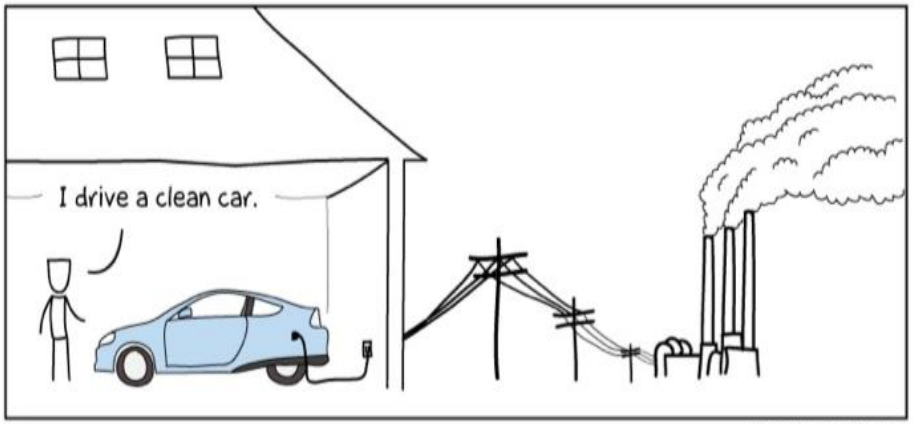


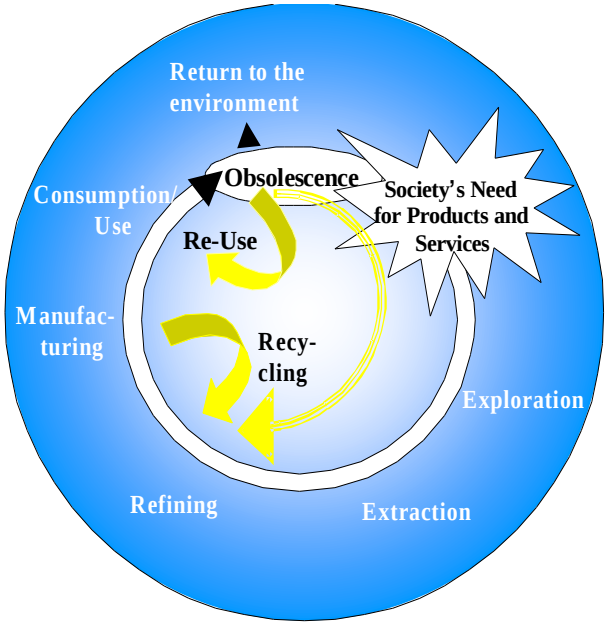

The Iceberg Effect



# Sustainable development depends on Life cycle thinking

## - "the world behind the product"

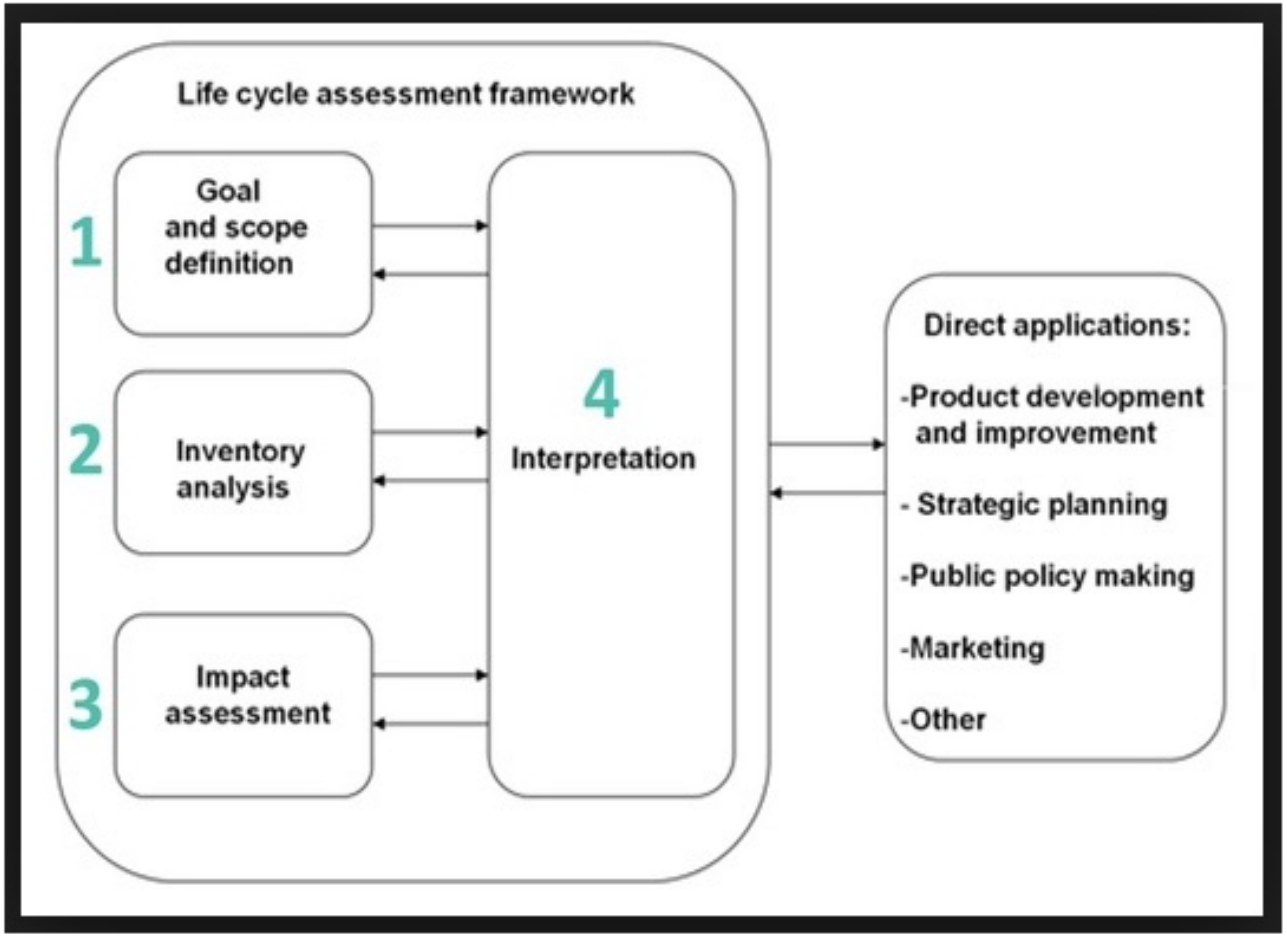



*"Consumers are increasingly interested in the world behind the product they buy.* ***Life cycle thinking*** *implies that everyone in the whole chain of a product's life cycle, from cradle to grave, has a responsibility and a role to play, taking into account all the relevant external effects."*

Dr. Klaus Töpfer, Executive Director, UNEP

Source: UNEP

# Standardised thinking: Life cycle analysis framework



# Selected Life Cycle Tools, Procedures and Concepts for efficient and effective implementation of SDGs

## Life cycle systems and concepts

Circular economy
Industrial ecology
Product-service system
Cradle to grave

## Life cycle assessment tools and methods

Life cycle assessment LCA* (materials, energy)
Materials flow assessment (MFA)
Input-Output tables
Social LCA (SLCA)
Life cycle Sustainability Assessment (LCSA)
Organisational LCA (O-LCA)
Life cycle Costing (LCC)
Chemicals assessment*
Risk assessment
Evolving assessment tools for biodiversity, LULUC, landscape etc.

## Action tools based on LCA

Eco-labels*
Environmental Product Declarations (EPD)*
Product environmental footprint (PEF)*
Eco-design

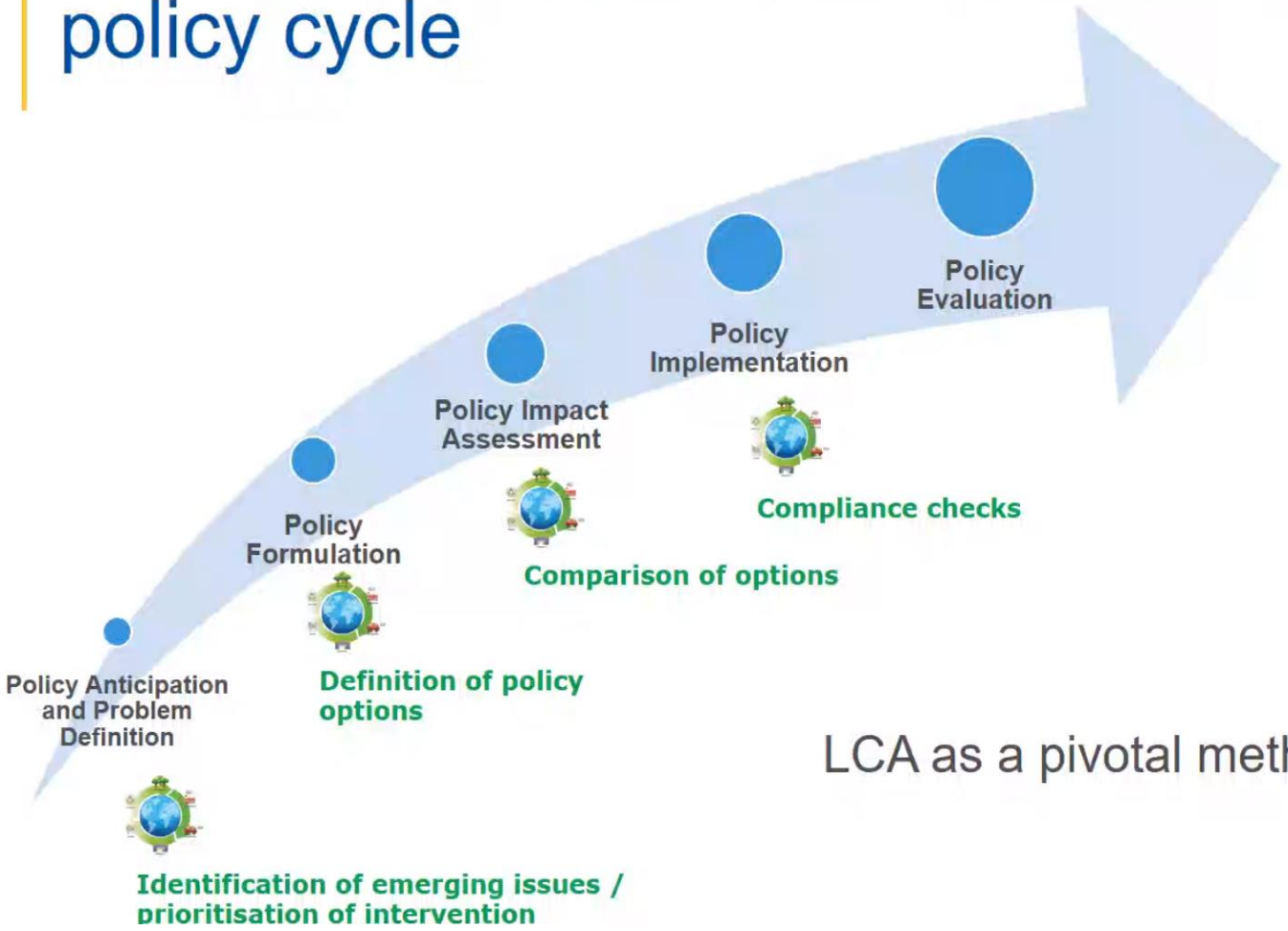
## Life cycle Management Tools

Sustainable supply-chain management (SSCM)
Circular materials management
Sustainable and/or circular public procurement (SSP, CPP)
Green purchasing (GP)
Extended Producer Responsibility (EPR)
Environmental Management Systems* (EMS, EMAS)
Sustainability reporting* (e.g. GRI)

# A look at LCT in EU policies

# The Policy Links

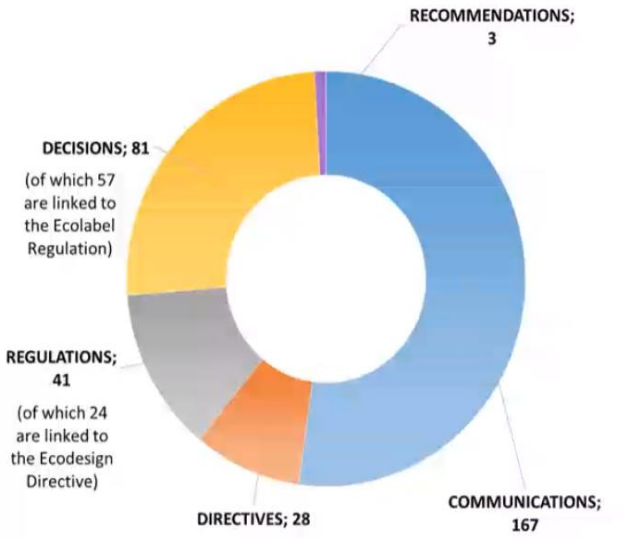
## Life Cycle Thinking and assessment in the policy cycle

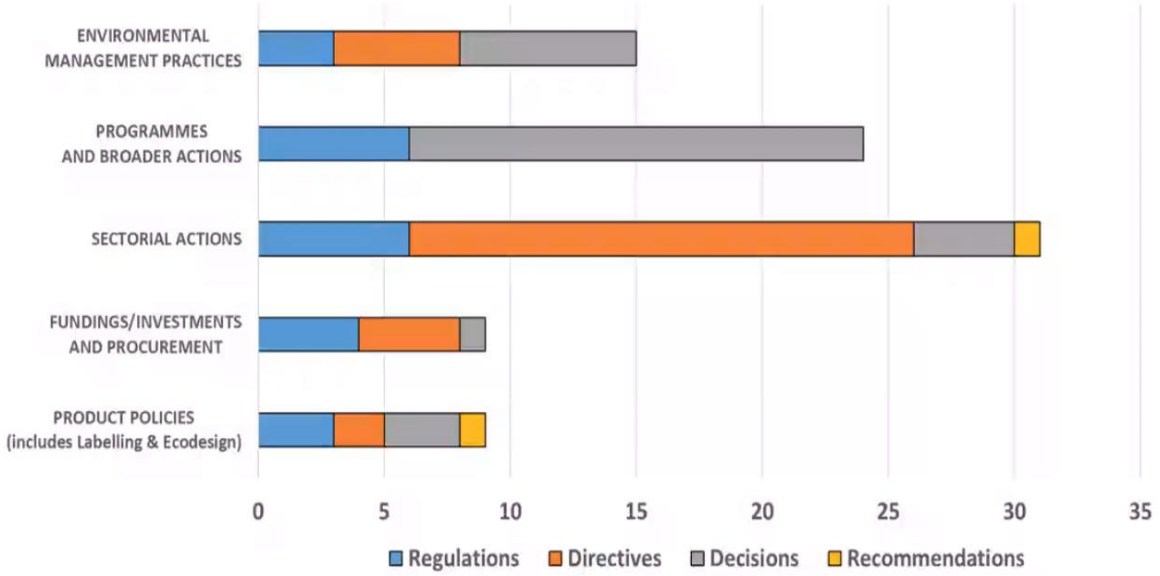



LCA as a pivotal method for policy support

Source: S. Sala EU JRC

# Types of policies

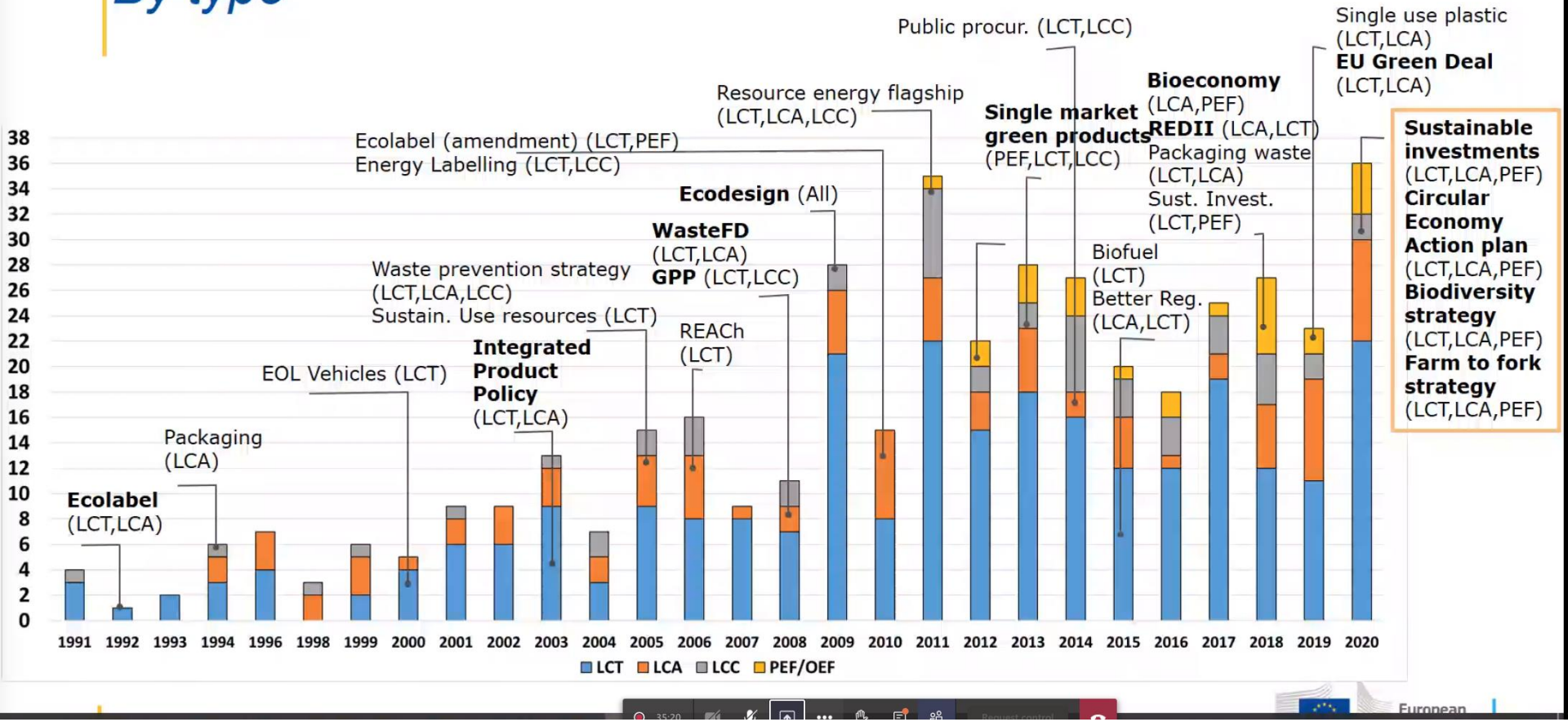



The figure is excluding specific implementations, such as the 57 Decisions linked to the Ecolabel Regulation and the 24 Regulations linked to the Ecodesign Directive

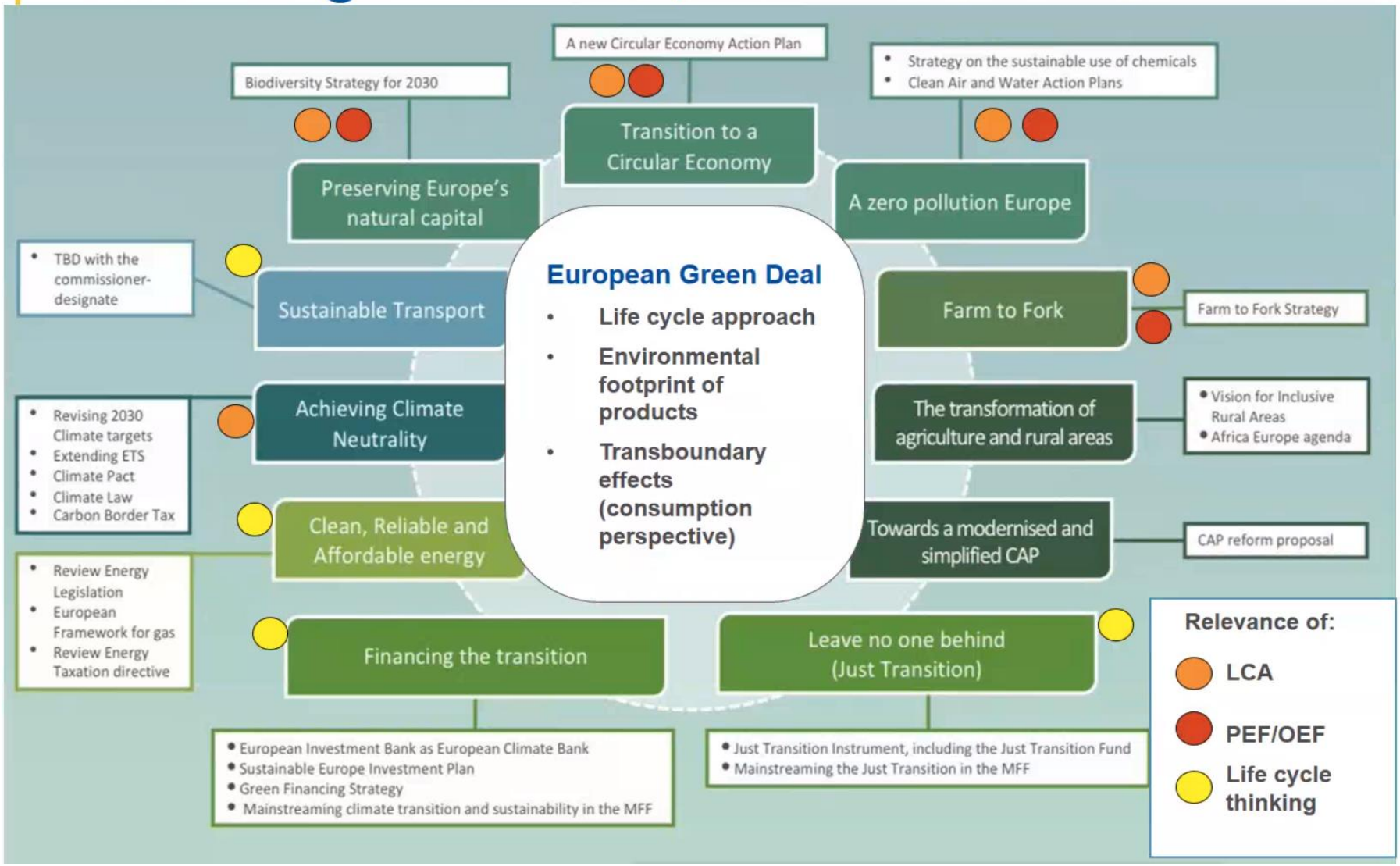
Source: S. Sala EU JRC

# Evolution of LCT/LCA/LCC/PEF in the EU policies
## *By type*




Source: S. Sala EU JRC

# The EU green deal, LCA and PEF/OEF



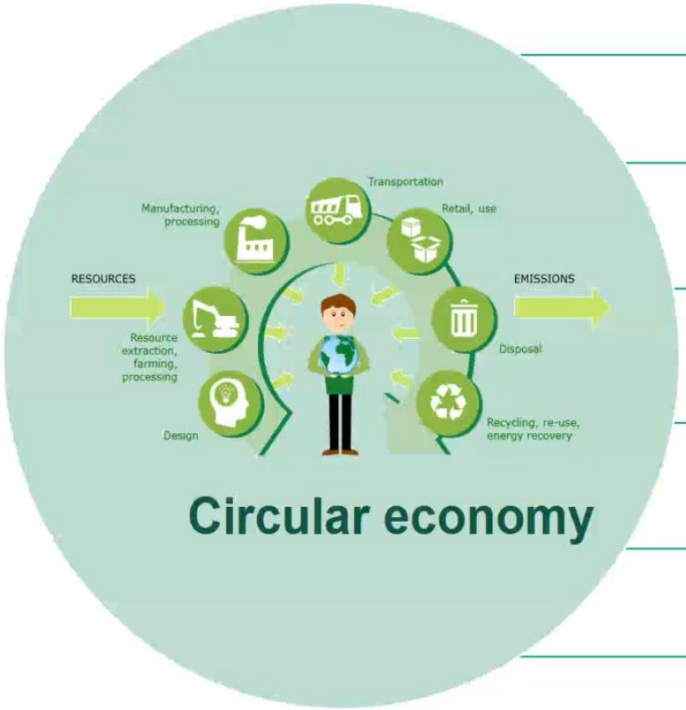

Source: S. Sala EU JRC

# “Farm to Fork” Strategy and CAP beyond 2020

- Adopting a system perspective
- Reducing the overall environmental footprint of the EU food system
- Supporting sustainability labelling of food products

Source: S. Sala EU JRC

# CEAP and LCA




- Harmonisation of product policies
- Green claims based on Product Environmental Footprint
- Improving efficiency of nutrients flows with a system perspective
- Improving waste collection and management systems as well as use of secondary raw materials
- Analysis of supply chains of key sectors: appliances, textile, plastics etc
- Consumer behaviors towards a green transition

Source: S. Sala EU JRC

# Conclusion

- The European **Commission** has put the delivery of the 2030 Agenda and its **SDGs on top of its political agenda** for **Green Deal**, shaping a sustainable Europe for future generations and striving for competitive sustainability.
- To fully implement SDGs across geographical and policy areas, a **multi- and interdisciplinary approach** is needed with solid evidence base.
- **Integrated modelling is key to identify synergies and unveil trade-offs** among SGDs, to anticipate direct and indirect effects, to assess sustainability of policies and define solutions to reach the SDG targets.
- Life cycle thinking and assessment are present into EU policies since the early 90's. Policies evolved over time and **now life cycle thinking and assessment are central in the Green Deal** as approaches to deliver on the ambitious targets
- **Improving the link between product and territorial policies** is an essential step towards more effective environmental policies

Consider the relevance of the above to regional policies and programmes

Source: S. Sala EU JRC

# A look at LCT in regional GPP

# EU GPP Policy & Regulatory Framework

**EC Communication (2017): Making Public Procurement work in and for Europe** – key priorities include:

- Ensuring wider uptake of innovative, green, and social procurement
- Boosting the professionalism of public buyers

**Revised Public Procurement Directives (2014)**

– key aim to facilitate and ensure the greater inclusion of common societal goals in the procurement process.

# Green public procurement – a Google search

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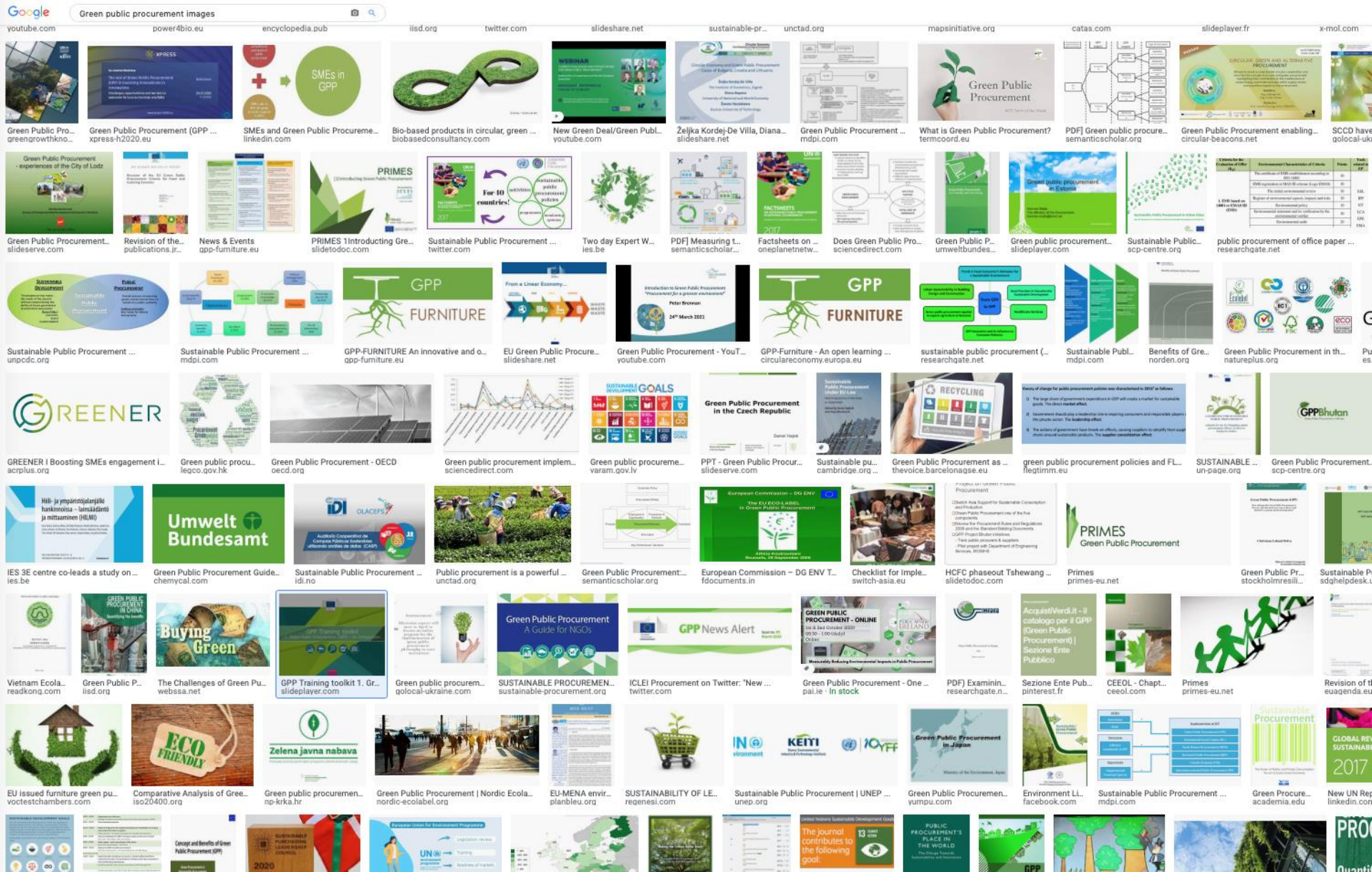
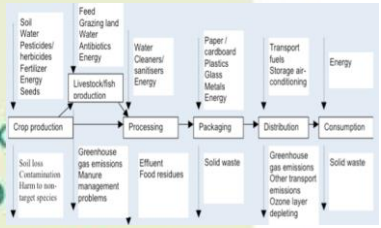
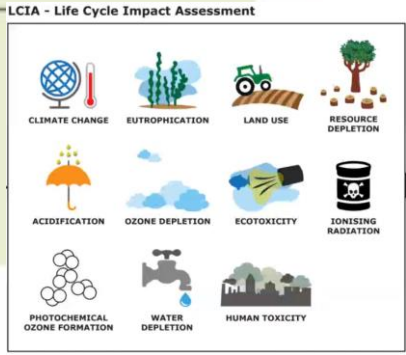


# The impacts of procurement

Every product we buy has a huge range of environmental impacts, **across the product life-cycle**

| | |
|---|---|
| Supply chain | • Consumption of raw materials<br>• Energy/water use, emissions and (tox<br>from industrial processing and transp |
| Usage | • Energy/water consumption<br>• Generation of waste and emissions<br>• Use of consumables (e.g. paper, ink) |
| Disposal | • Generation of waste<br>• Toxic emissions<br>• Potential new raw material |



# LC Toolbox* for Green Public Procurement

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Product-service system
Cradle to grave

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Extended Producer Responsibility (EPR)
Environmental Management Systems (EMS, EMAS)
Sustainability reporting (e.g. GRI)

*NB: Other tools may apply depending on local circumstances

# GPP is a journey rather than a destination

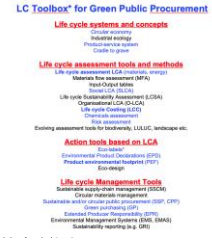
# LC tools reported in regional GPs at TLJ4

**LCA**
**Social LCA**

**Internal LCC**
**(Extended LCC – none)**

**Carbon footprint**
**Nutrition footprint**

**Product standards and labels**



# Appreciation of GPs presented at TLJ4

**Overall high quality, with a useful variety of examples and experiences, highlighting also challenges in implementation.**

**Some observations :**

* Variety of single- and multi-SDG applications and laws
* Life chains mostly invisible
* Potential spill-over effects not mentioned
* Seeing qualitative LCT as well as standardized LCA
* LCC use increasing (purely internal, not yet estimating societal costs)
* Low visibility of eco-labels, EPD, PEF
* Metrics for application  of selection criteria often missing
* Applied to specific product types rather than all products
* Following EU Directives
* Illustrating tender processes as well as GPP case studies
* Seeing voluntary as well as regulatory GPP systems
* Need for documentation, guidelines, training

**Next steps?**

# Next steps ?

## Wait for the Q & A

## Some options

**Enhance the GPs**

**Talk to stakeholders**

**Expand training**

**Upgrade the procedures**

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# Thank you

**and**

# good luck on the road ahead

**Fritz Balkau**

*sustainable solutions*