

LIFE CYCLE THINKING – THE USE OF LIFE CYCLE ASSESSMENT IN EU POLICIES



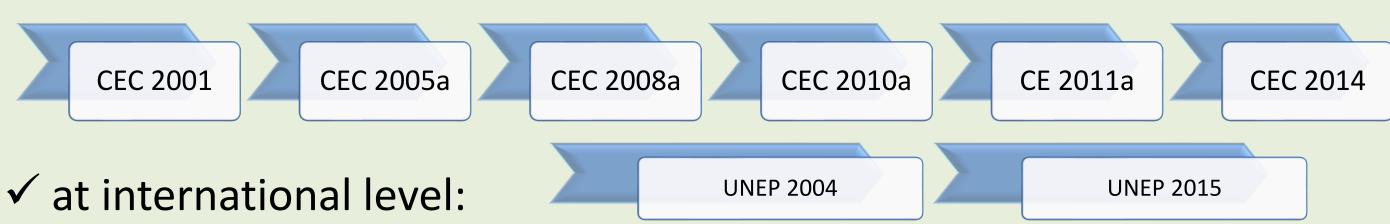
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LIFE CYCLE THINKING (LCT) - LIFE CYCLE ASSESSMENT (LCA)

Life cycle thinking

- ✓ the backbone of several EU environmental policies (public & private sector)
- ✓ at national level:



Life

Life cycle assessment

- ✓ standardized methodology (ISO 14040, 14044) for evaluating potential environmental impacts related to a product, a process or a system, along its life cycle
- ✓ multi-criteria assessment methodology covering a wide variety of pressures and impacts associated with human health, ecosystem health, and resources

LCA METHODOLOGY

Goal & scope statement
Intended application
Reasoning
Intended audience
Functional unit
System boundary
Allocation procedures

Agricultural process

Vine shoot waste water

Lignin, wastewater

Sicethanol

Reasoning
Intended audience

Functional unit
System boundary

Allocation procedures

Data collection (foreground, background)
Calculation procedure

Material and energy inputs and waste and emissions outputs of the system



Impact categories (midpoint, endpoint)
Classification, characterization
Mandatory elements
Normalization, grouping, weighting
Optional elements

Results of the evaluation (consistent with the defined goal and scope)

Conclusions and recommendations to decision makers

Product development

Environmental information





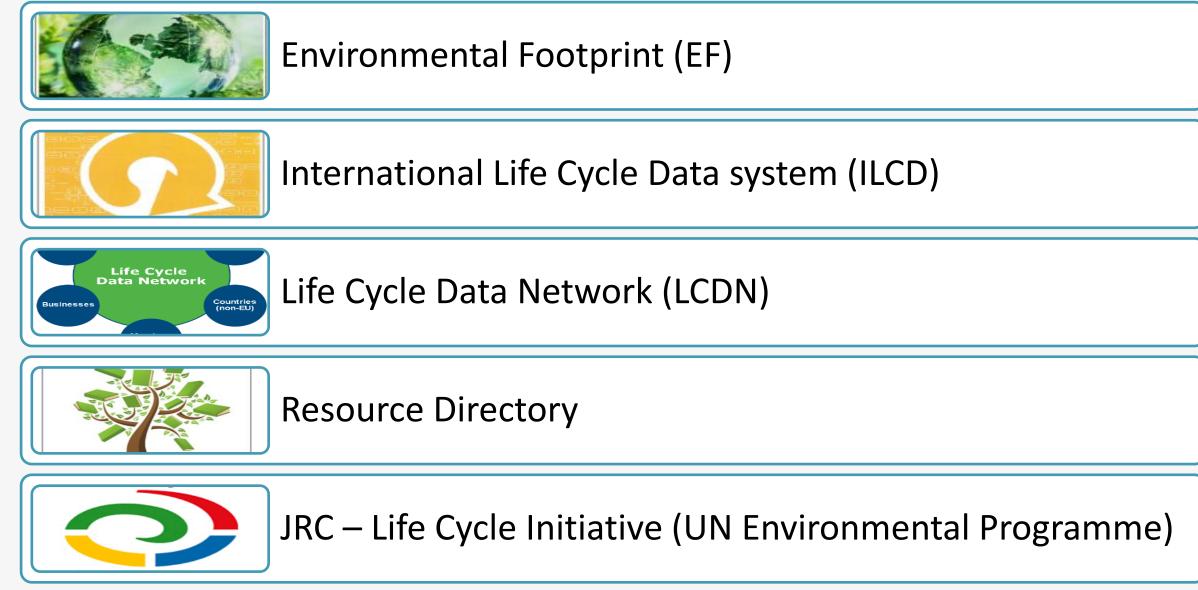
EUROPEAN PLATFORM ON LIFE CYCLE ASSESSMENT (EPLCA)



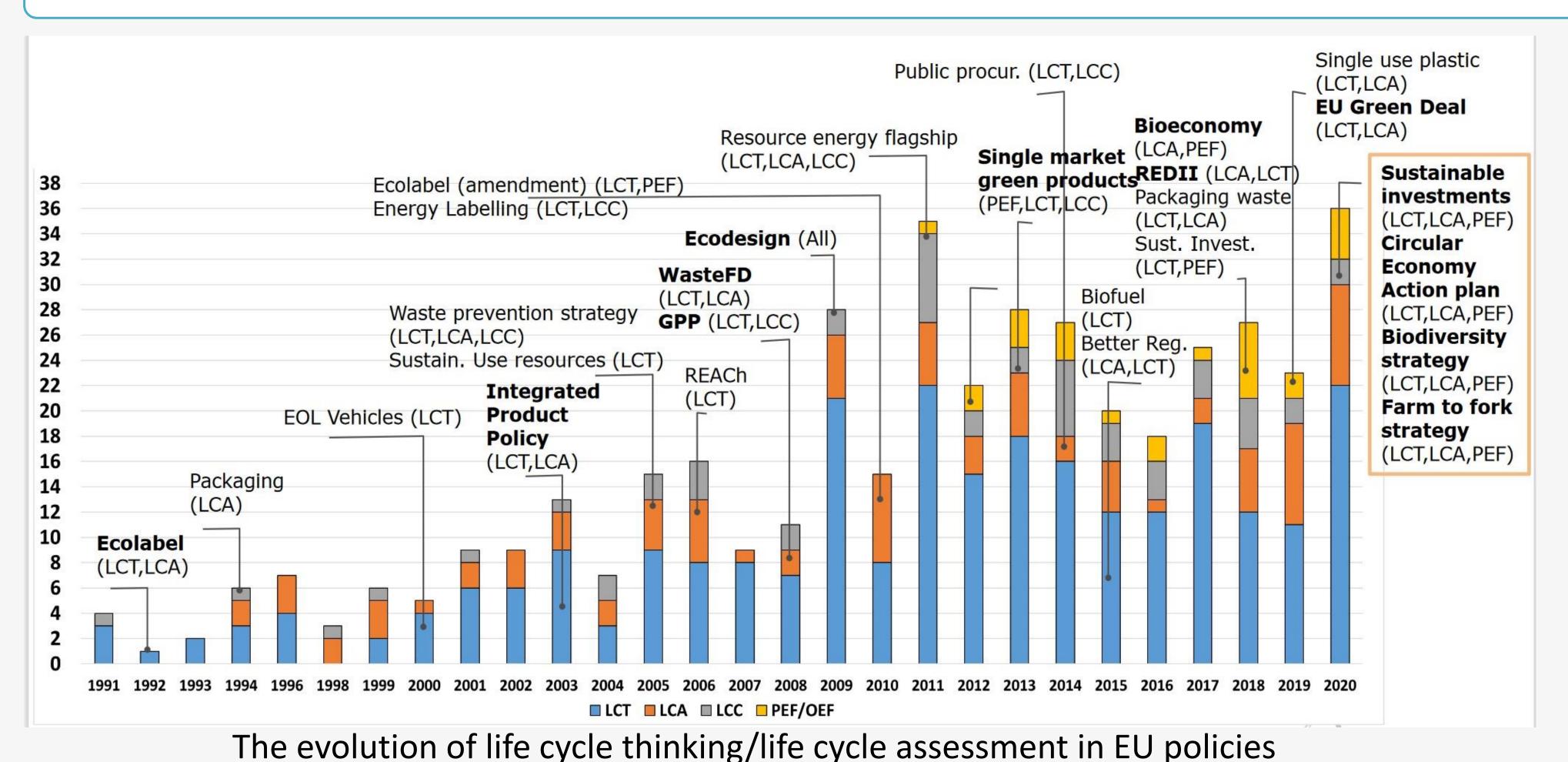
➤ EPLCA - the EU's knowledge base that responds to business and policy needs towards sustainable production and consumption

https://eplca.jrc.ec.europa.eu/

> supports the methodological development of LCA for the analysis of supply chains and end-of-life waste management



LCT & LCA IN EU POLICIES



- ✓ LCT & LCA have been incorporated into the main environmental EU policies since the early 90's
- ✓ LCT & LCA are transitioning from academic to wider societal applications
- ✓ LCT & LCA have been acknowledged as efficient methods supporting impact assessment, implementation measures and monitoring requirements
- ✓ nowadays LCT & LCA are central in the European Green Deal, tackling climate and environmental-related challenges

REFERENCES

Sala, S., Reale, F., Cristobal-Garcia J., Marelli, L., Pant R., 2016, Life cycle assessment for the impact assessment of policies. EUR 28380 EN. Luxembourg (Luxembourg): Publications Office of the EU https://eplca.jrc.ec.europa.eu/index.html#menu1

https://www.imperial.ac.uk/media/imperial-college/research-centres-and-groups/life-cycle-approaches/public/LCN-Seminar-EC-JRC-10112020.pdf

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