

# Product environmental footprint and Consumption footprint to support Green Deal

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# Joint Research Centre – European Commission



As the science and knowledge service of the European Commission, the Joint Research Centre's mission is to support EU policies with independent evidence throughout the whole policy cycle.

As a Commission service independent from national or corporate interests, the JRC builds trust by providing evidence to support the definition of policies - from their design to implementation, monitoring and evaluation.

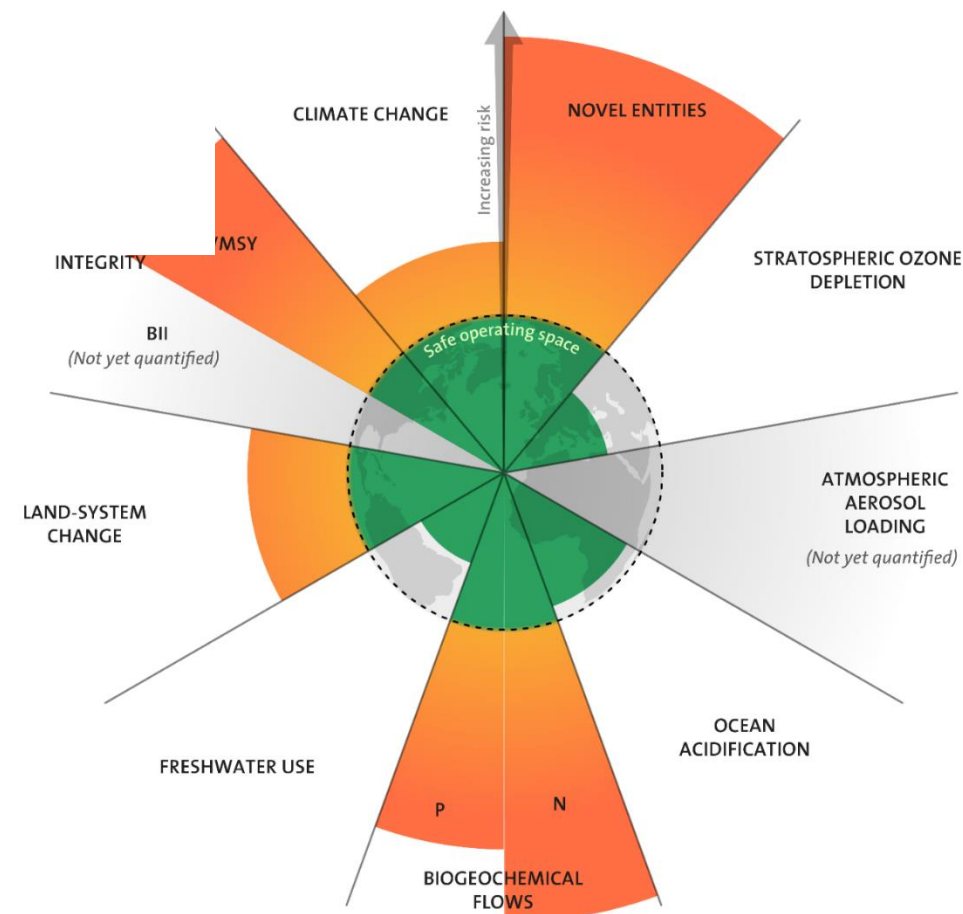
# Contents

- Life cycle assessment in the EU policies, Green Deal and beyond
- Product environmental footprint evolution
- Consumption and consumer footprint, addressing SDGs and planetary boundaries



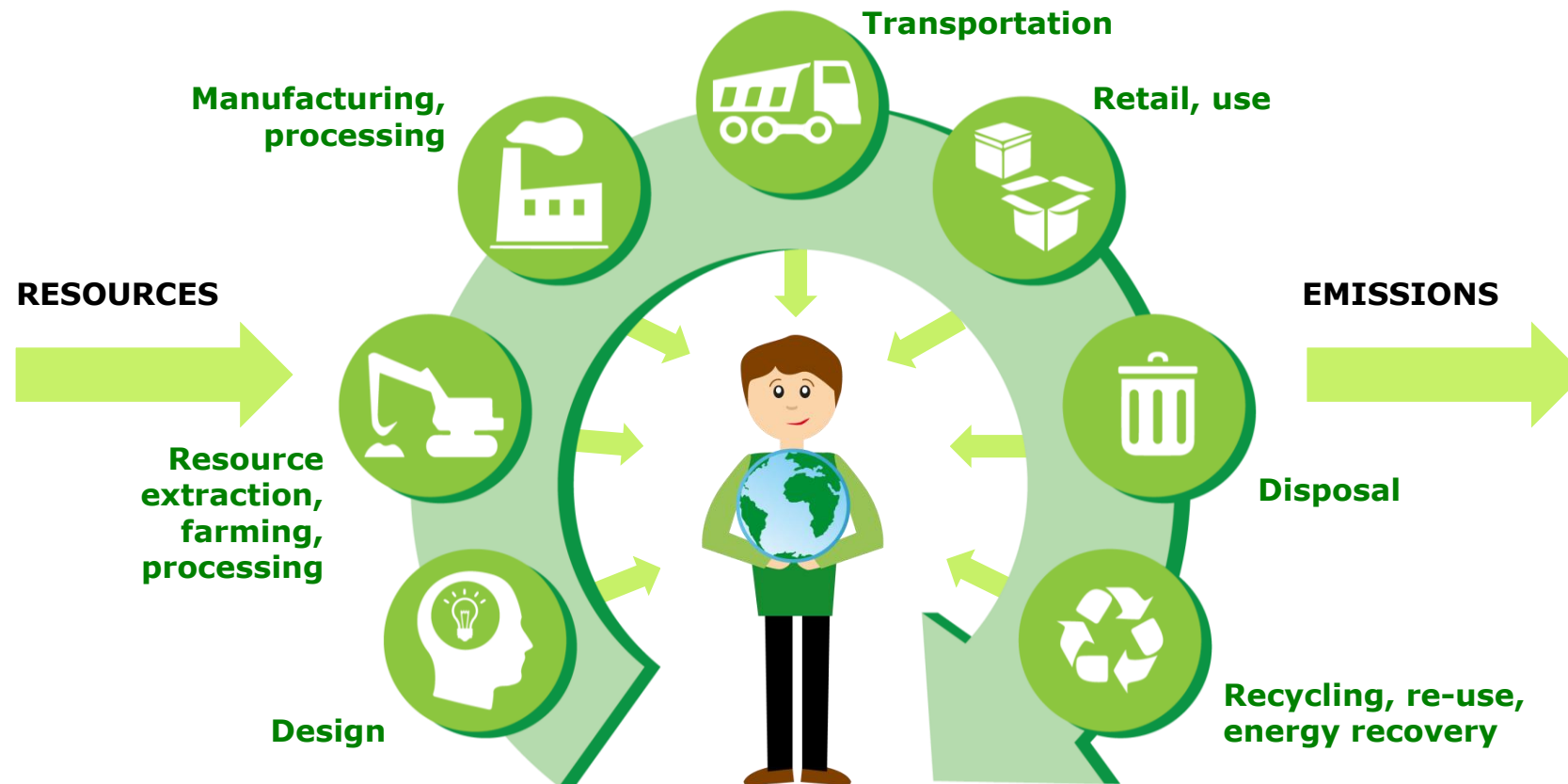
*“A life of dignity for all **within the planet's limits** that reconciles economic prosperity and efficiency, peaceful societies, social inclusion and environmental responsibility is at the **essence of sustainable development**”*

*COM(2016) 739 final: Next steps for a sustainable European future*



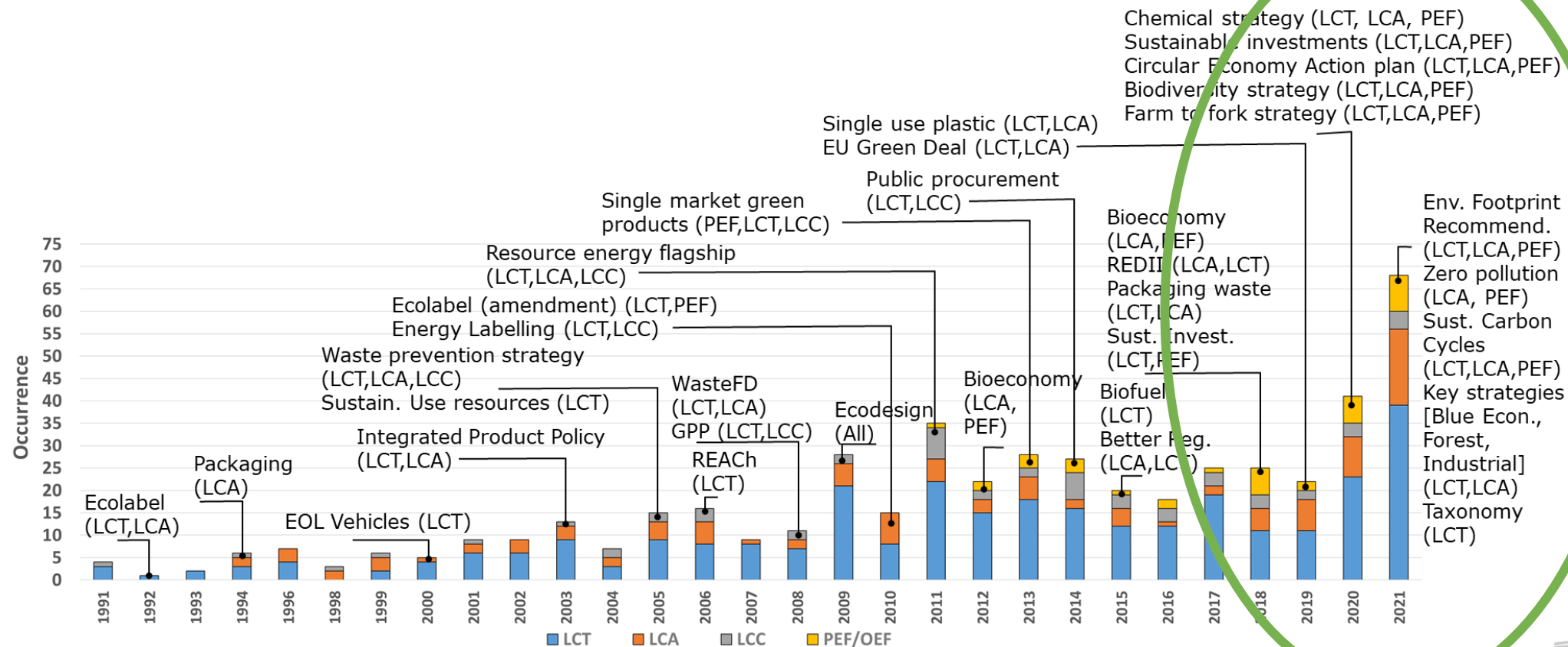
# Life Cycle Thinking

*Core concept for Sustainability Assessment of Goods, Services, Organisations, Regions and individual consumption patterns*



# Evolution of LCA in EU policies over the last 30 years

- Since 90's, Life Cycle thinking progressively adopted in EU legislation
- Since 2008, JRC was instrumental in making LCA tailored for policies



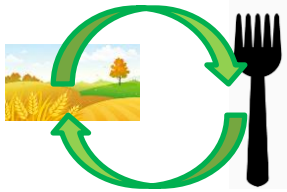
**EU  
GREEN  
DEAL**



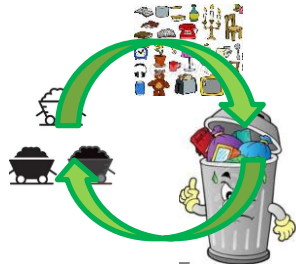
# Life cycle thinking is central in the EUROPEAN GREEN DEAL and beyond

## Key Policies

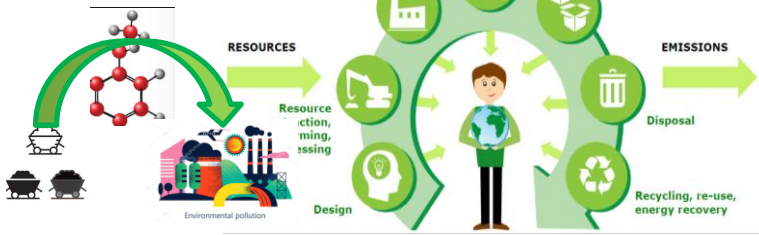
### Farm to fork



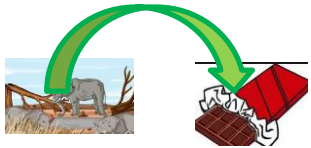
### Circular economy



### Zero pollution and chemical strategy



### Biodiversity strategy



### Sustainable Development Goals



Bioeconomy strategy  
Industrial strategy  
Better regulation  
New Consumer Agenda

and many others...

## Implementing tools



Environmental footprint

*Comparing product A and product B*



Consumption Footprint

Domestic Footprint

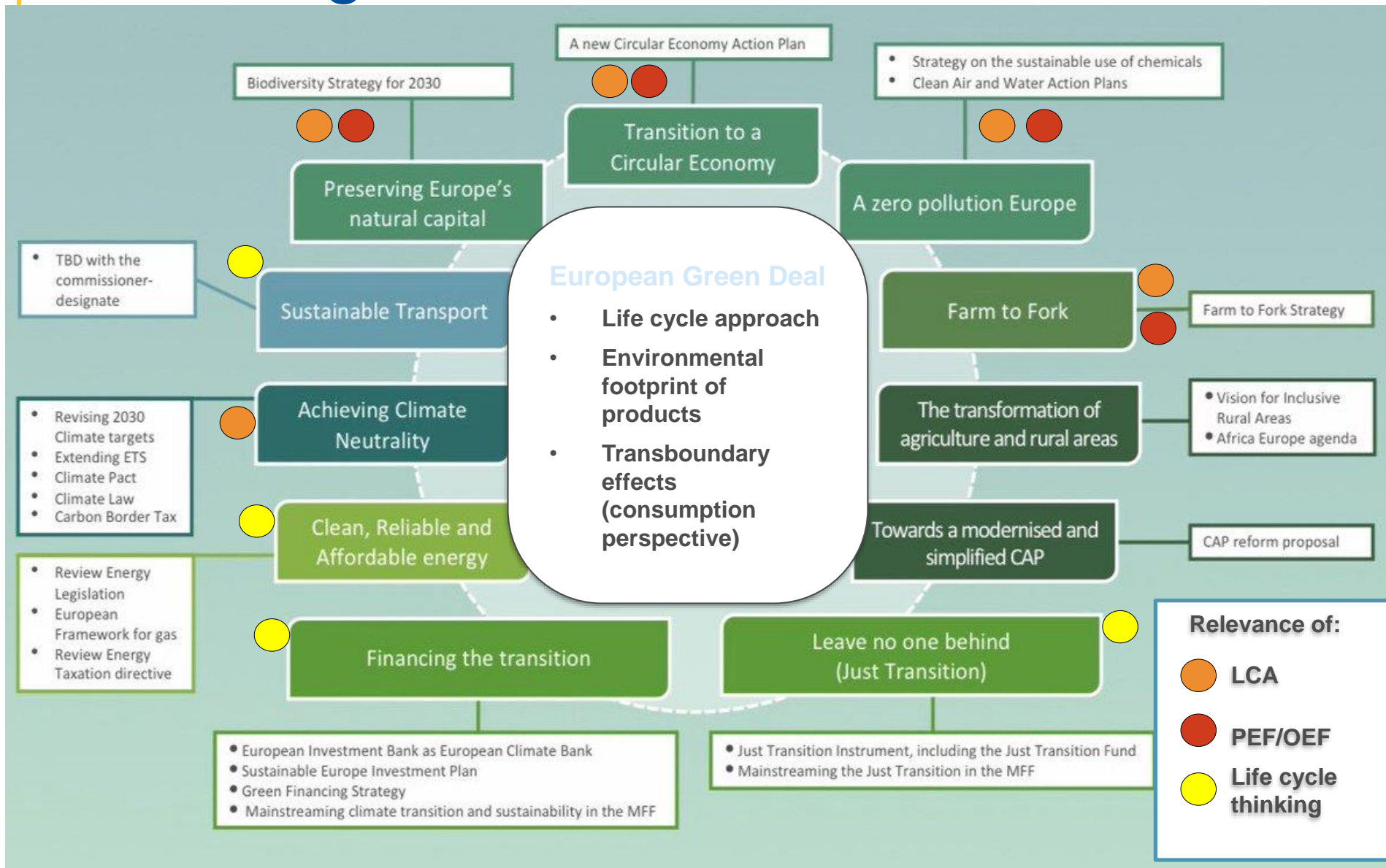
*Macro-scale assessment of EU consumption and production*



Consumer Footprint

*Assessing impacts of individual consumption*

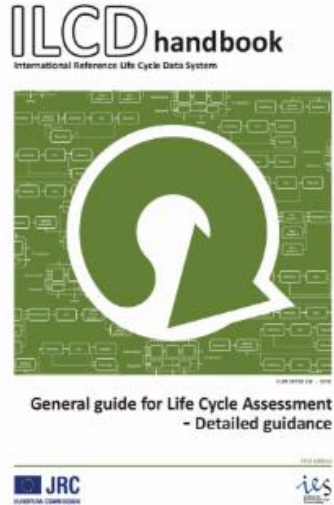
# The EU green deal, LCA and PEF/OEF





# Environmental Footprint and EU Platform on LCA

## Methodological developments for LCA in policies



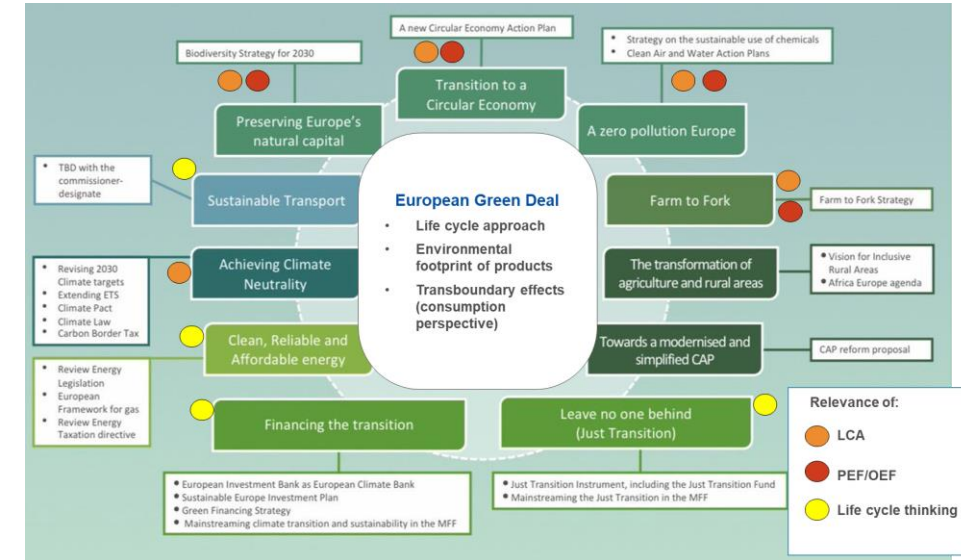
ILCD  
development



European  
Platform on PLCA



Environmental  
Footprint



LCA and EF in the EU Green Deal

2008

2012

2013-2021

2022 - ...

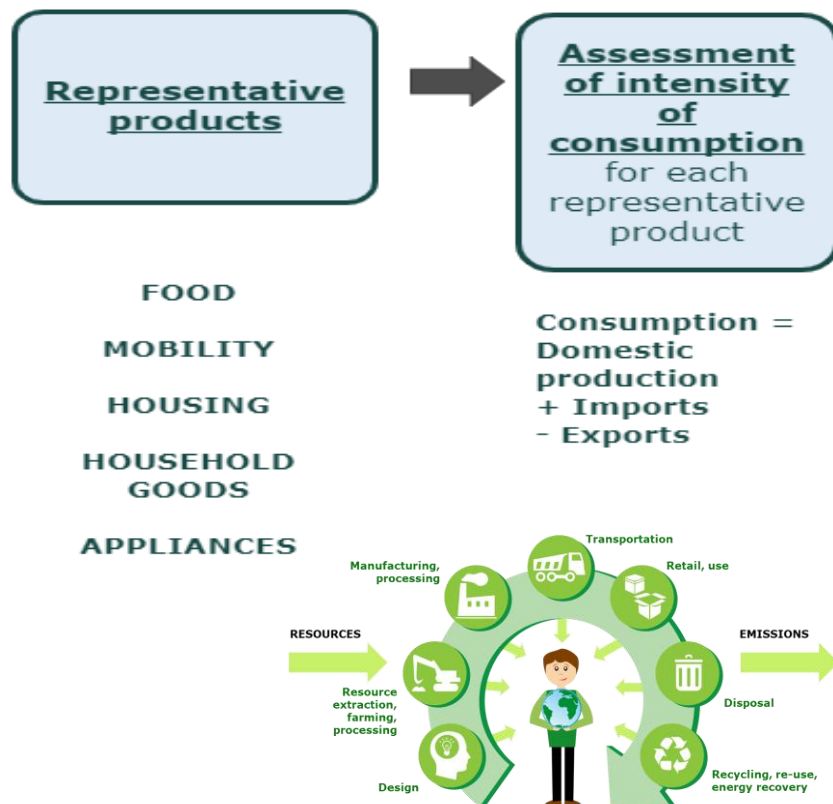
JRC long standing support to implement LCA in policies...

# Consumption Footprint

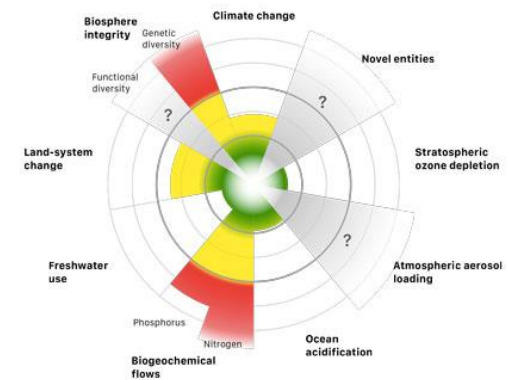
Environmental emissions  
to air, water and soil

Potential Impact indicators

Assessment



## Planetary boundaries



## SDGs



# Consumption footprint platform

- Data per MS and per EU
- From 2010 to 2020
- Numerous features for exploring results
  - Decoupling
  - Planetary boundaries
  - SDGs



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European Platform on Life Cycle Assessment

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Consumption Footprint Platform

### Welcome to the Consumption Footprint Platform

The European Commission has developed a **Life Cycle Assessment (LCA)-based framework to monitor the evolution of the overall environmental footprint of EU production and consumption** and compare the footprint against planetary boundaries. The Domestic Footprint and Consumption Footprint indicators respond to key challenges posed by the need of a systemic and holistic assessment of transition towards sustainability and represent a key set of indicators to support the ambitions of the [European Green Deal](#), such as circular economy ([Circular Economy Action Plan](#)), zero pollution ([Zero Pollution Action Plan](#)), sustainable food production ([Farm to Fork Strategy](#)) and biodiversity conservation ([EU Biodiversity Strategy for 2030](#)).



► DOMESTIC FOOTPRINT

► Comparing PRODUCTION and CONSUMPTION

► Assessment against SDGs

► CONSUMPTION FOOTPRINT

► Consumption Footprint by PRODUCT

► Impacts of the food system

► Assessment of DECOUPLING

► Assessment against PLANETARY BOUNDARIES

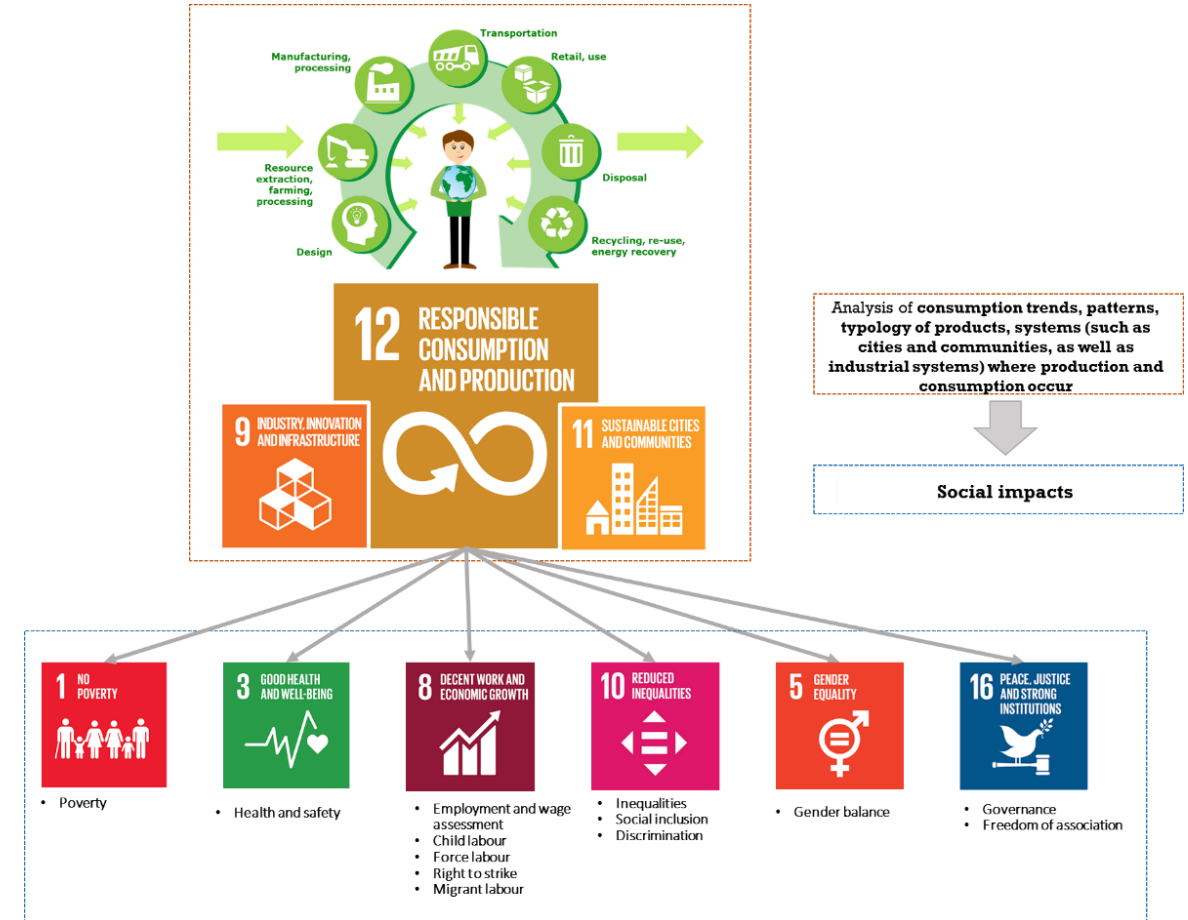
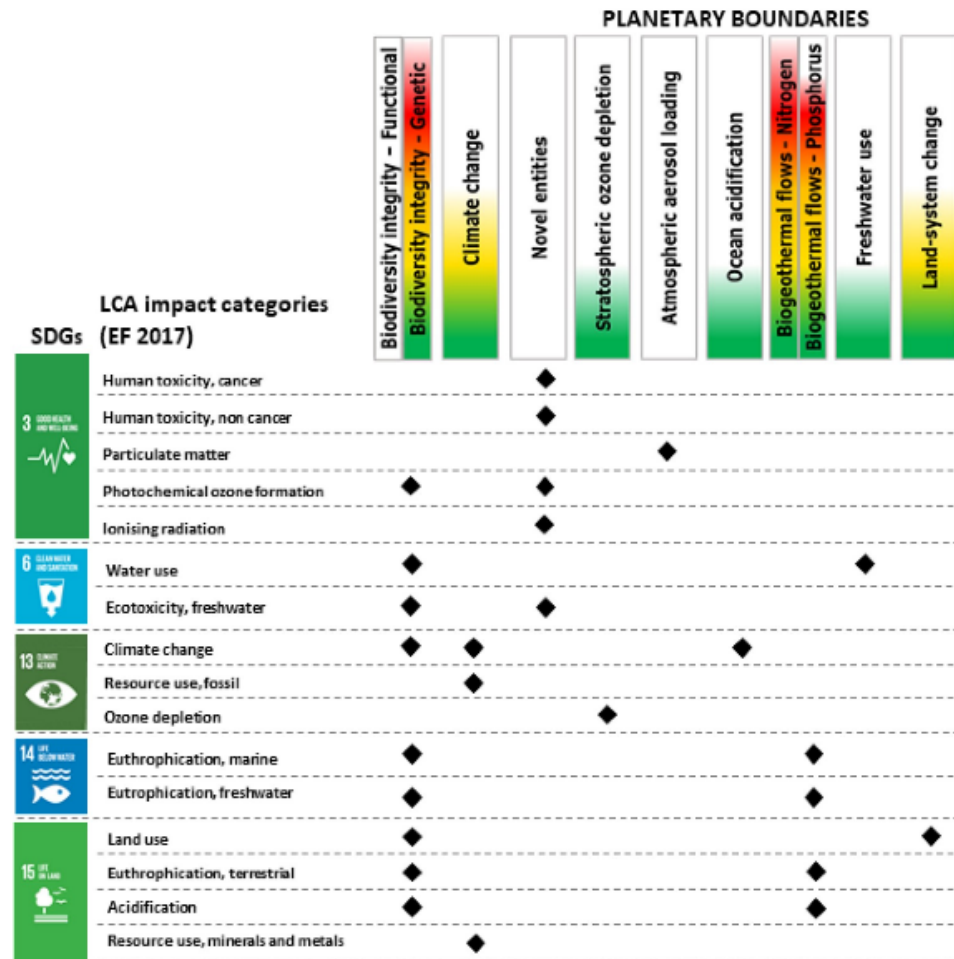
Download data

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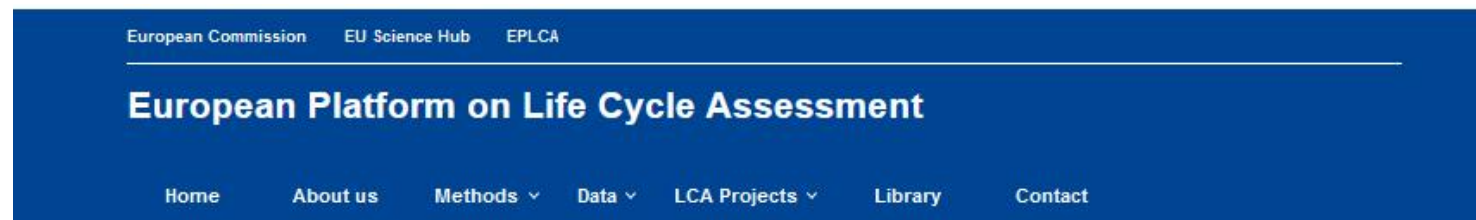
# LCA categories of impacts, planetary boundaries and SDGs





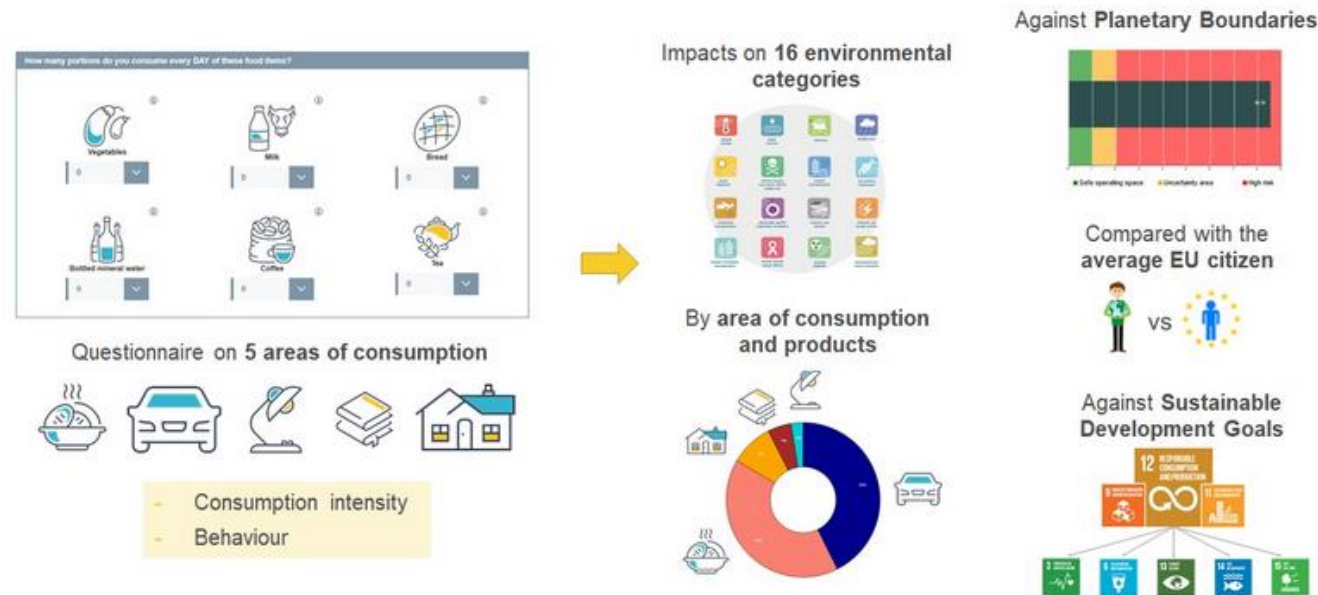
# Consumer footprint calculator

- Assessment of individual footprint
- Numerous collaborations within and beyond the EC
- Training for ECA, REA, national bodies etc



## Consumer Footprint Calculator

The Consumer Footprint Calculator allows EU citizens to calculate the environmental impacts of their consumption patterns and to evaluate how changes in their lifestyle may affect their personal footprint.



The assessment of the consumption patterns is performed for five areas of consumption, namely food, housing, mobility, household goods, and appliances. The tool follows a life cycle-based approach that considers the impacts occurring along the entire life cycle of the consumed products, i.e. all the resource used and emissions to the environment taking place from the raw materials extraction to the end of life. The environmental impacts of the consumption patterns are evaluated with the 16 environmental impact indicators of the Environmental Footprint method and the resulting single weighted score, compared to planetary boundaries, and compared to the environmental burdens of the consumption pattern of the average EU citizen.

Calculate your consumer footprint!

# Conclusions

- Life cycle thinking and assessment may support **the quantitative integrated modelling of (socio- economic) and environmental aspects**, their link with sustainability targets and the with SDGs, e.g. as in the **consumption footprint platform**
- At product and organisation levels, the **EU environmental footprint** plays an important role to support a transition towards sustainable production and consumption patterns



# Thank you



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