A-LCA in the EU context

EUROPEAN RESEARCH ON MOBILE EMISSION SOURCES

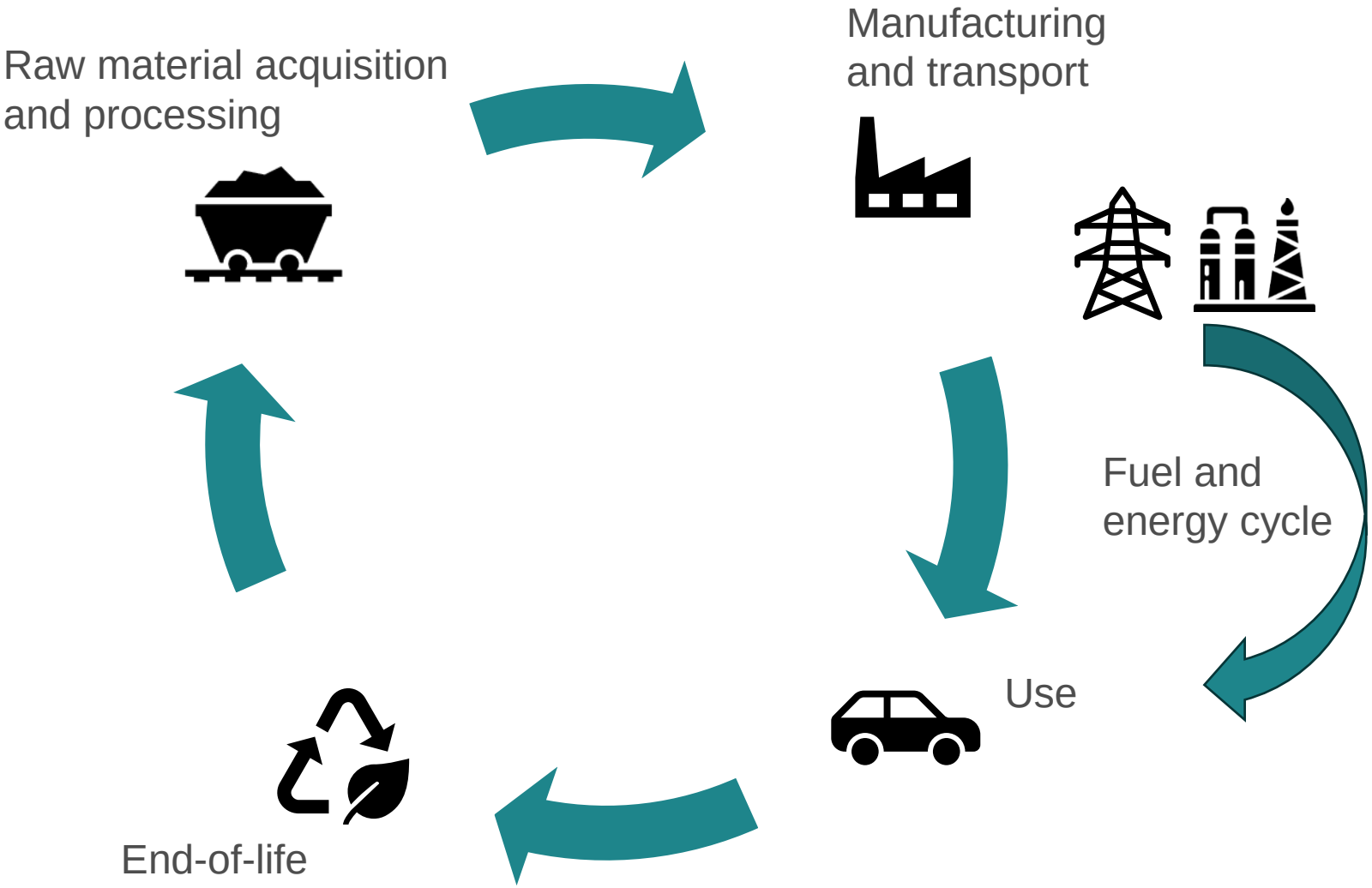
Plenary session

12-13 November 2024

DG CLIMA.B.3 – ***Mobility (I): Road***

Dina Silina

Vehicle life-cycle stages



- '**life cycle**' (LC) means the consecutive and interlinked stages of a product system, from raw material acquisition or generation from natural resources to final disposal (ISO 14040:2006)
- **The LC CO_2 methodology** will cover all the stages of a vehicle's life, including fuel and energy cycle

European Commission

Legal context: Regulation (EU) 2019/631

- Article 7a:
  - By 31 December 2025, the Commission shall publish a report for the EP and the Council, and to adopt a delegated act, **setting out a methodology for the assessment and the consistent data reporting of the full life-cycle CO_2 emissions of passenger cars and vans**.
  - As of 1 June 2026, vehicle **manufacturers may voluntarily report** to the Commission **life-cycle CO_2 emissions data** for their new cars or vans, using that methodology.
- Article 14a:
  - The reported life-cycle CO_2 emissions shall be considered by the Commission as one of the factors in the **bi-annual progress report** to the EP and the Council.
    Deadline for first report is 31 December 2025.

For HDVs, the revised **Regulation (EU) 2019/1242** requires the Commission **to evaluate the possibility** of developing a common methodology for the assessment and reporting of the full life-cycle CO2 emissions of HDV by 31 December 2027.

References for the methodology

ISO standards

- ISO 14040/14044: 2006 on life-cycle assessment (LCA)
- ISO 14067:2018 on carbon footprint of products
- ISO 14083:2023 on WTW GHG emissions for transport

Environmental Footprint (EF) method

- Developed by the Commission in 2013, building on standard LCA methodology (ISO)
- Contains detailed rules to guide the implementation
- Updated in 2021, covering **16 impact categories**, including **climate change**.
- Commission Recommendation (EU) 2021/2279 recommends to use the EF method also in **EU legislation**

0.12.2021 EN Official Journal of the European Union L 471/1

II

(Non-legislative acts)

RECOMMENDATIONS

COMMISSION RECOMMENDATION (EU) 2021/2279

of 15 December 2021

on the use of the Environmental Footprint methods to measure and communicate the life cycle environmental performance of products and organisations

Other relevant EU legislation

- **Batteries Regulation** (EU) 2023/1542 **–** regulates the entire life cycle of batteries (incl. EV batteries) and sets requirements to determine and declare the **carbon footprint** (CF) using the EF methodology
- **Renewable Energy Directive** - rules for calculating the life cycle GHG impact of biofuels and biogases. Default GHG emission intensity values for different fuels and their production pathways.
- **Circularity and End of Life Vehicle Regulation** (proposal) – mandatory targets for recycled content but does not include CF methodology.
- **Critical Raw Materials Regulation** - requirement to develop a methodology for calculation of the Environmental Footprint for CRM

UNECE Informal Working Group (A-LCA IWG)

- **UNECE Automotive LCA (A-LCA) Informal Working Group (IWG)** set up in 2022 at the initiative of Japan and Korea under WP.29/GRPE - Working Party on Pollution and Energy
- Objective: to develop an internationally-harmonised procedure to determine the carbon footprint of different technologies, also considering energy use for energy pathways and automotive types from production to use and disposal, as **a resolution** under the framework of WP.29
- Scope: all types of road vehicles with different technologies for energy pathways (current focus on light-duty vehicles)
- The Commission follows the work of IWG and participates in different Subgroups (SGs)

UNECE A-LCA IWG

Timeline:

- Informal draft GRPE March 2025
- Draft resolution ~July 2025
- GRPE adoption ~October 2025
- WP.29 adoption ~March 2026

	Responsible for	Membership*		
		Leader(s)	Participants	Observers
SG1	Overarching Aspects	IWG Leading Team	SG Leaders	2
SG2	Material & Material Recycling	Japan	15	33
SG3	Productions	China/Korea/OICA/CLEPA	22	40
SG4	Use	EC/OICA/AVERE	20	31
SG5	End of Life	China/Japan	11	36
SG6	Fuel and Energy Cycle	Japan/AVERE	21	25
SG7	Drafting	VW Group/OICA/ADEME	tbc	tbc

Next meetings:

- 19th session : 9 December, 2024 (web)
- 20th session : 4-5 February 2025 in Tokyo, Japan (Hybrid)
- 21st session : end of June (in person meeting – venue tbc)

Documentation: Automotive - Life Cycle Assessment (A-LCA) - Transport - Vehicle Regulations - UNECE Wiki

Development of EU LC CO_2 methodology

- Principles:
  - Build on existing EU rules and requirements
  - Take into account work in progress at EU and international level, in particular the UNECE A-LCA methodology
  - Aim for an implementable, robust, and verifiable methodology, striking the balance between obtaining an accurate result and limiting administrative burden (Better Regulation)
- Resources:
  - Commission in-house expertise
  - Consultant contract
  - Stakeholder consultations (2 stakeholder workshops: 1st workshop on 11 Dec 2024 hybrid format)
- Timeline: 31 December 2025 to publish report and adopt delegated act

Thank you!

European Commission