



**SUSTAINABLE  
INLAND TRANSPORT**

**INLAND TRANSPORT COMMITTEE**



**UNECE**

**Corporate GHG reporting and  
product carbon footprint for the  
transport sector:**

**Complementarities and need for  
harmonization**

Francois Cuenot, UNECE

ITF CPB workshop on GHG corporate reporting

26 April 2024

# Corporate GHG reporting and product carbon footprint

Index



- About UNECE
- Links between Scope 3 emissions and Product carbon footprint for the transport sector and its supply chain
- UNECE activities on product carbon footprint and related activities
  - Automotive-LCA globally harmonized methodology
  - Transport Data Commons
  - Inland Transport Committee GHG strategy to 2050
- Other product-level initiatives linked with the transport/automotive supply chain
- Conclusion and next steps

# About UNECE



- One of the 5 Regional Commissions of the UN (covering Continental Europe and North America)
- On transport, the Inland Transport Committee (ITC) equivalent to IMO and ICAO for inland transport
  - 60 legal instruments (49 in force), 30 legal instruments have countries outside of ECE region
  - 152 countries are contracting parties to at least one transport legal instrument
- On vehicle regulations, 3 global agreements with mutual recognition of vehicle certification; covers safety, environment, automation
  - Look for the E markings



# Scope 3 emissions and Product level carbon footprint



- Scope 3 emissions of Auto OEMs the sum of its production individual carbon footprint:
  - Also relevant for supply chain and energy suppliers
  - Needs for consistency between scope 3 and product level calculation methodologies
- Vehicle Use phase key contributor to overall lifetime / scope 3 emissions
  - ISO / GHG Protocol / PCR standards not always prescriptive enough (see next)
  - Share of carbon footprint moving from use phase to manufacturing phase with vehicle electrification (see next+1)
- Transport supply chain under pressure to provide data to their customers
  - Different OEMs asking for different data with different system boundaries, different templates, different scopes => urgent needs for methodology harmonization

# Same standard, different assumptions

- Product Category Rule (PCR) for passenger cars being finalized under EPD international framework
- 2 EPDs for EVs/PHEVs already available (draft PCR has different values for different vehicle size)

Vehicle classification	D Segment
Propulsion and Fuel type	Battery Electric Vehicle (BEV)
Maximum passenger capacity of the vehicle	5
Curb Weight	2 035 kg
Emission standards	Euro 6d
Life span	300 000 km, 10 years.
Battery type	NCM523
Battery gross capacity	79.97 kWh

Fuel/energy consumption (CLTC): 14.4 kWh/100km.

## LCA information

Functional unit: Transport of 1 passenger for 1 km through the lifetime of the passenger car. Default number of the passenger is 1.

Reference service life: 225 000 km.

Time representativeness: Specific data covers the period from January to September 2023.

Database(s) and LCA software used: Simapro version 9.5.0.2 and databases Ecoinvent 3.9.1 are used for generic data.

Source : EPD document S-P-11617

Vehicle classification	C Segment
Propulsion and Fuel type	PHEV
Maximum passenger capacity of the vehicle	5
Curb Weight	1 897 kg
Emission standards	Euro 6d
Life span	150 000 km, 15 years.
Battery type	NMC 811
Battery gross capacity	22 kWh

Fuel/energy consumption (WLTP):

Drive cycle	Fuel consumption (Petrol)	Electricity consumption
Combined	7.2 L/100km	N/A
Weighted combined	1.0 L/100km	185 Wh/km

Source : EPD document S-P-11540

PAGE 3/10



## LCA information

Functional unit: Transport of 1 passenger for 1 km through the lifetime of the passenger car. Default number of the passenger is 1.

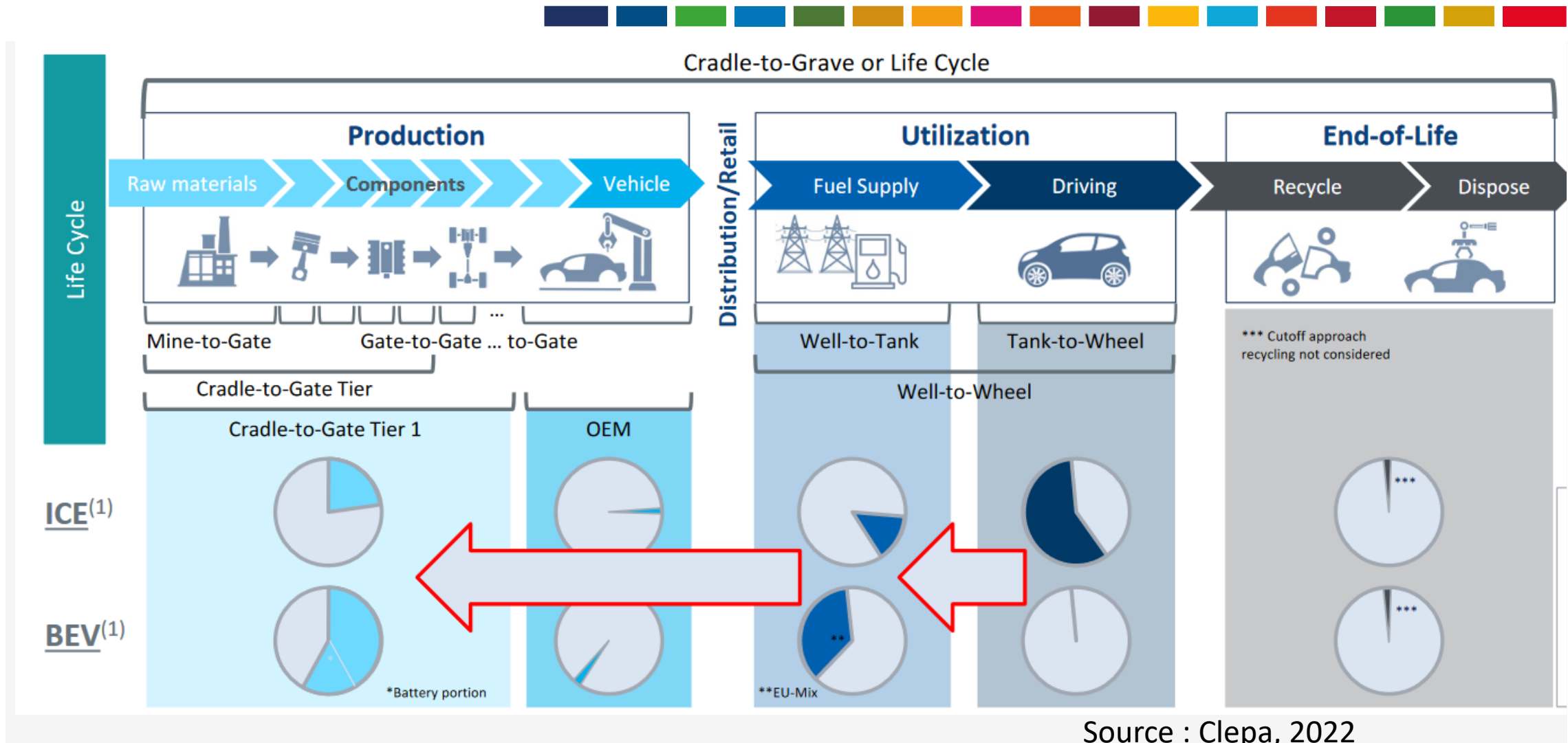
Reference service life: 150 000 km.

Time representativeness: Specific data covers the period from January to December 2022.

Database(s) and LCA software used: Simapro version 9.5.0.2 and databases Ecoinvent 3.9.1 are used for generic data.



# Shift towards production emissions with electrification





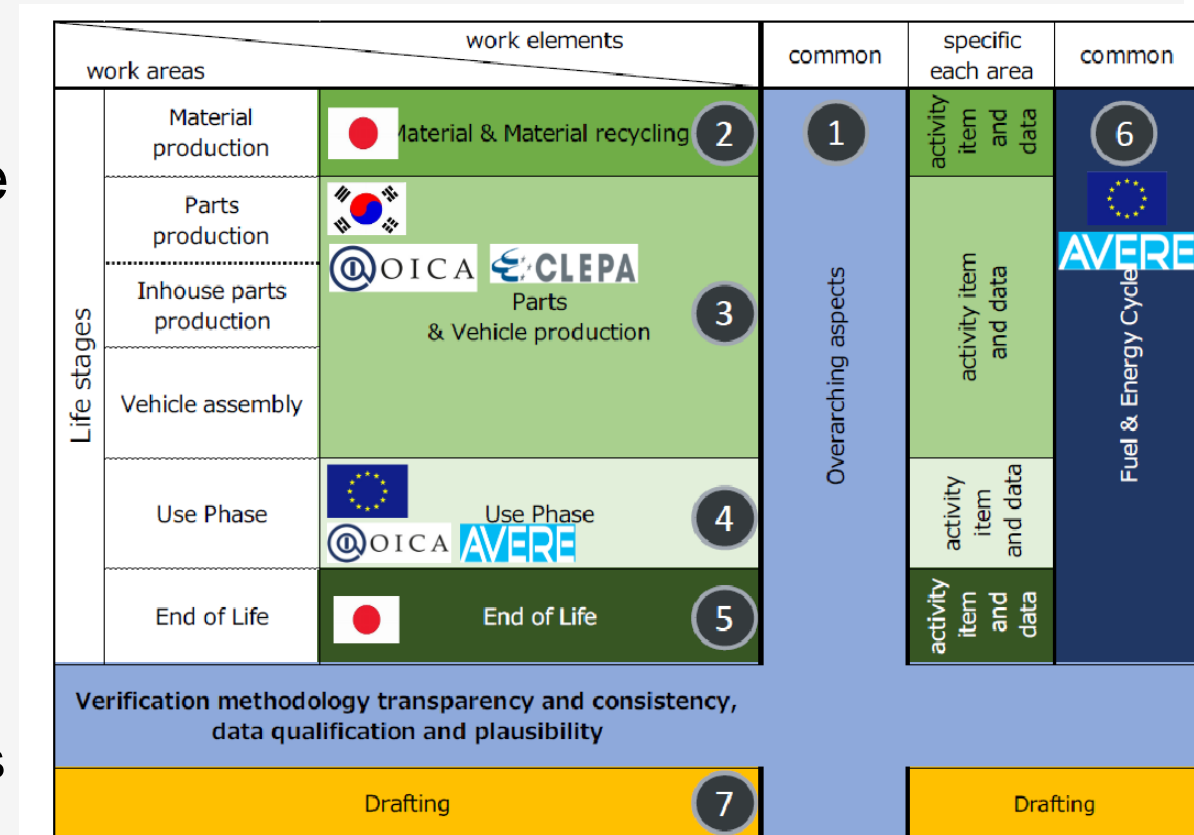
# UNECE activity on carbon footprint of vehicles

As part of the World Forum for Harmonization of Vehicle Regulations (WP.29)



- End 2022, Japan and Korea started dedicated activity “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”

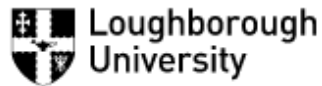
- Work split in 6 Sub Groups
- Strong implication from Japan, Korea, EU, US, industry and other stakeholders
- Draft methodology expected in 2025
- Initial focus on cars; vans, trucks and 2/3Ws in the scope



# other UNECE related activities



- UNECE is hosting a prototype website for “Transport Data Commons”
  - Initial scope on transport and climate data, GHG corporate reporting potentially in the scope
    - Wide array of involved partners
    - More info <https://transportdatacommons.unece.org/>





# The Inland Transport Committee GHG strategy to 2050



- The higher-level transport body of UNECE has adopted a strategy paving the way for net zero inland transport sector by 2050.
- Complimentary to IMO and ICAO strategies to decarbonize maritime and aviation
- Some considerations for circular economy, LCA approaches and one action “to create incentives for transport users to make informed choices and for operators to optimize their services”, similar to CountEmissionsEU
- More info and full strategy available at :

<https://unece.org/transport/documents/2024/02/draft-inland-transport-committee-strategy-reducing-greenhouse-gas>

# Other non UNECE initiative on product level carbon footprint for the transport/automotive sector



- Many initiatives on-going to develop automotive/transport specific methodologies for product carbon footprint determination; for example:
- PCRs for jets, rail, buses and cars under EPD international
- Industry consortium Catena-X to digitalize automotive supply chain information with application on carbon footprint
- TransensusLCA EU Horizon project to determine a carbon LCA methodology for electrified vehicles.
- Component specific standards/methodologies, eg on batteries
- Digital Product Passports gaining momentum in the transport sector, with carbon footprint high on the impact parameters included

# Conclusions and next steps



- Corporate GHG reporting closely linked to product-level carbon footprint determination
  - Vast majority of ITF CPB members part of transport product /vehicle LCA
  - Need to harmonise methodologies, scope boundaries, assumptions, data sources
- Primary data key to meaningful differentiated results
  - Primary Data Share (PDS) good metric to provide transparency about share of primary data used in GHG reporting
- Regulatory applications are being deployed
  - Cross Border Adjustment Mechanisms (CBAM) around the corner
  - Manufacturing emissions linked with fiscal incentives for EVs in France



INLAND TRANSPORT COMMITTEE



**Thank you!**