

Alignment w/ SGs

December 17th, 2024

ALIGNMENT WITH SGs



SG7

- Feedback/answers to SG7 comments/questions
- Collaboration model for drafting

SG2

- Chain of custody
- Recycling allocation -> SG2 draft refers to CFF
- Level concept:
 - Clarification of wording: methodology, guidance, use of formulas
 - Agreement from 10/2023 reconfirmed
 - Proposal for Level 1 & 2 to be checked by SG2

UNECE IWG A-LCA
SG2 – SG3 ALIGNMENT

	SG2 & SG3	SG6	SG2	SG3	SG3	SG4	SG5		
LCA Level	Clipping, material losses & scrap rates	Energy provision	Logistics	Material production process	Parts manufacturing process	Vehicle manufacturing process	Use phase	Eol	Representativeness
Level 1	no clipping, material losses or scrap neglected	to be filled	to be filled	Generic footprint per kg of vehicle curb weight No differentiation by material, parts or production processes			to be filled	to be filled	Global average /regional average
Level 2	Generic clipping, material losses & scrap rates accounted for (e.g. via markup)			Specific vehicle information from BOM & IMDS/CMS (e.g. vehicle curb weight) Generic representation of production or manufacturing processes					Global average /regional average
Level 3	Specific/individual clipping, material losses and scrap rates			Supplier individual primary data on production of hotspot materials*	Supplier individual primary data on production of hotspot parts*	OEM specific primary data for inhouse hotspot processes & hotspot parts*			Regional & individual supply chain for hotspots
	Generic clipping, material losses & scrap rates			Secondary information for materials of remaining parts	Secondary information for remaining parts	Secondary information for remaining parts & processes			
Level 4	Specific/individual clipping, material losses and scrap rates			Supplier individual primary data on production materials*	Supplier individual primary data on production of parts*	Supplier & OEM-individual primary data*		Individual supply chain	

*alternatively secondary data to fill gaps in primary data

ALIGNMENT WITH SGs



SG5

- Level 2

$$C_{VP} = \sum_i \left(M_i (R_i \times U_i \times CEF_{i,R} + (1 - R_i) \times U_i \times CEF_{i,V}) \right)$$

Wherein:

- R_i share of recycled material i in percentage of the gross material input (%)
- $CEF_{i,V}$ Carbon emission factor of virgin material i reflecting material production, component and vehicle manufacturing in kilogram of carbon dioxide equivalent (kgCO₂e/kg)
- $CEF_{i,R}$ Carbon emission factor of recycled material i reflecting material production, component and vehicle manufacturing in kilogram of carbon dioxide equivalent (kgCO₂e/kg)

$$C_{VP} = \sum_i \left(M_i \times U_i \times \left((1 - R_{1i}) \times E_{V,i} + R_{1i} \times E_{rec,i} + CEF_i \right) \right)$$

Wherein:

- R_{1i} Proportion of material input to the product that has been recycled from a previous system. [%]
- CEF_i Carbon emission factor of component and vehicle manufacturing in kilogram of carbon dioxide equivalent (kgCO₂e/kg)
- $E_{v,i}$ Specific emissions and resources consumed (per unit of analysis) arising from the acquisition and pre-processing of virgin material. [kgCO₂e/kg]
- $E_{rec,i}$ Specific emissions and resources consumed (per unit of analysis) arising from the recycling process of the recycled (reused) material, including collection, sorting and transportation process. [kgCO₂e/kg]

Recommendation from SG3-Meeting on 17th:
Offer both alternatives

ALIGNMENT WITH SGs



SG5

- Energy Recovery

$$(1 - B)R_3 \times (E_{ER} - LHV \times X_{ER,heat} \times E_{SE,heat} - LHV \times X_{ER,elec} \times E_{SE,elec})$$

Wherein:

B Allocation factor of energy recovery processes. Zero is always applied in the environmental footprint framework. $\rightarrow B = 0$

R_3 Proportion of the material in the product that is used for energy recovery at EoL.

E_{ER} Specific emissions and resources consumed (per unit of analysis) arising from the energy recovery process (e.g. incineration with energy recovery, landfill with energy recovery, ...). [kgCO₂e/kg]

$E_{SE,heat}, E_{SE,elec}$ Specific emissions and resources consumed (per unit of analysis) that would have arisen from the specific substituted energy source, heat and electricity respectively. [kgCO₂e/MJ]

$X_{ER,heat}, X_{ER,elec}$: The efficiency of the energy recovery process for both heat and electricity.

LHV Lower Heating Value of the material in the product that is used for energy recovery. [MJ/kg]

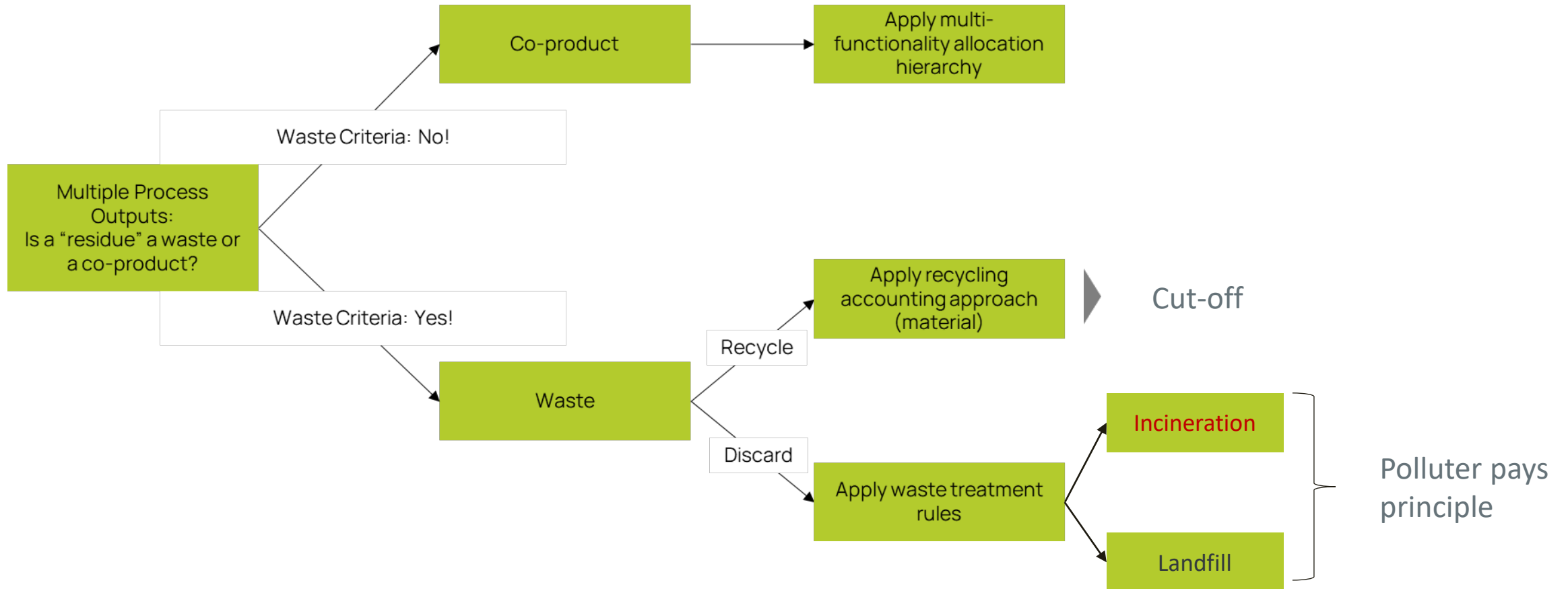
Recommendation from SG3-Meeting on 17th:
Follow SG5 proposal (full formula)

ALIGNMENT WITH SGs

SG5



Incineration of discarded waste



SG3 DRAFTING TF

CUT-OFF-CRITERION



In general, all processes and flows that are attributable to the analyzed system shall be included. If, based on the results of a screening analyses, individual material or energy flows are found to be insignificant for the carbon footprint, these may be excluded for practical reasons (see ISO 14067, PEF method). Process modules, inputs and outputs may only be excluded if their **sum represents less than 3% of the total product carbon footprint** within the specific life cycle stage or from individual suppliers (e.g. per delivered part unit). This evaluation must reflect the defined system boundary relevant to each life stage or supplier context, ensuring that the exclusion applies appropriately across all relevant phases of the production, use & end of life. This 97% coverage shall be achieved and documented in a screening analysis.

An initial screening of the Life Cycle Inventory (LCI) of (a) representative vehicle(s)/product(s) shall be performed and, referred to as the screening step and is required with each update of the LCI.

The screening pursues the goal to point out needs of action in terms of data collection activities or activities to improve data quality. A screening shall include the Life Cycle Impact Assessment (LCIA) for the Impact Category Global Warming Potential and allow further refinement of the PCF system model of the product(s) in scope in an iterative manner as more information becomes available. Within screening, no exemption is allowed, and readily available primary or secondary data may be used, fulfilling the data quality requirements to the extent possible. If data, such as emission factors, activity data, or measurements are unavailable or challenging to identify, it is essential to find the most appropriate data or proxy emission factors, in case of doubt a conservative choice shall be taken

To determine the 97% coverage, the PCF data received from upstream reporting entities and emission factors shall be considered as 100%, as direct insights in the actual coverage of the upstream processes are at least very difficult if not impossible.

SG3 DRAFTING TF

CUT-OFF-CRITERION



Once the screening is performed, the initial scope settings may be refined. The representative product approach and a description of the excluded attributable processes shall be documented.

Compliance can be proven on a product category or sectoral level and does not have to be executed on a product level. Product category rules or sectoral guidance can specify simplified rules to be applied.

In case cut-off is applied the **PCF shall be corrected to 100% coverage** by dividing the PCF value (with applied cut off) by the coverage that was achieved (with applied cut-off).

SG3 DRAFTING TF

INFRASTRUCTURE EMISSION AND CAPITAL GOODS



This section provides rules for infrastructure and capital goods, such as the building in which the product or upstream materials or components are produced, machinery used in the manufacturing of the product or its materials or components, vehicles used for transportation in the product system. The applicable infrastructure and capital goods are limited to those that are not consumed and retained their function for a certain period.

In general, the production and end-of-life processes of infrastructure and capital goods used in the product system shall be excluded in the system boundaries. Any deviation from that definition shall be clearly indicated in the LCA report.

The obligation to indicate the deviation also applies if a dataset is used for A-LCA already includes infrastructure/capital goods, and it is not possible, within reasonable effort, to subtract the data on infrastructure/capital goods from this dataset.

OPTION N°	Purpose	Degree of freedom	Electricity Modeling at Production	Electricity modeling at Use phase	Electricity modeling EoL
Level 1	strategy	multiple approaches possible	Method : location based (flexibility to use market based depend on the study) Time : Flexibility static or Dynamic (depending on the aim of the study) Geography : continent/ region or country can be chosen, depend on the study Data : secondary (if available: primary)	Method : Time : Geography : Data :	Method : Time : Geography : Data :
Level 2	strategy	multiple approaches possible	Method : location based (flexibility to use market based depend on the study) Time : Flexibility static or Dynamic (depending on the aim of the study) Geography : continent/ region or country can be chosen, depend on the study Data : secondary (if available: primary)	Method : Time : Geography : Data :	Method : Time : Geography : Data :
Level 3	reporting	single fixed approach	Method : Market based (foreground system), residual mix > fossil mix (fall back secondary data) [hierarchy] (background system) Time : Static Geography : production place Data : secondary & primary	Method : Time : Geography : Data :	Method : Time : Geography : Data :
Level 4	reporting	single fixed approach	Method : Market based (foreground system), residual mix > fossil mix (fall back secondary data) [hierarchy] (background system) Time : Static Geography : production place Data : primary (fall back secondary)	Method : Time : Geography : Data :	Method : Time : Geography : Data :

Method : market-based vs location based
Time : for prospective phases (Use phase & EoL) – dynamic vs statics

Geography : country/region/others
Data : type of data to use (e.g. IEA stated policies)

64 years advocating for safer, smarter, and more sustainable mobility



+120 global car part suppliers, covering all parts in a vehicle



20 national trade associations & sector organisations



+3,000 companies across the entire supply chain



OUR VISION

Our vision is for European automotive suppliers to be the leading providers of highly efficient and sustainable mobility worldwide

OUR MISSION

Supporting the EU and UN decision-making process and shaping the legislation impacting the automotive business

Being a credible partner for the EU institutions and the UN authorities

Ensuring coherent and consistent development of international trade and global technical harmonization

Actively endorsing the development of necessary competitive framework conditions

Promoting innovation and ensuring EU funding for RDI

Complying fully with EU competition and antitrust rules

EUROPEAN AUTOMOTIVE SUPPLIERS AT A GLANCE



75% of the value of a vehicle comes from its parts, components, and systems



32% of total **R&D investment** comes from automotive, making this industry the top private R&D investor in the EU



over €35 billion are invested yearly in research and development



1.7 million direct jobs generated across Europe



+39,000 new patents are registered each year



€26.7 billion trade surplus generated in 2023