
Outline of the IWG on Automotive Life Cycle Assessment (A-LCA)

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1. Establishment of the IWG on Automotive Life Cycle Assessment (A-LCA)

- Proposal to work on the clarification of methodologies for the assessment of life-cycle Greenhouse Gas (GHG) emissions of automotives by Japan and Korea during the 85th GRPE session (January 2022)
- Workshop was organized during the 86th GRPE session (May 2022)
- GRPE agreed to put the A-LCA methodology on its priority list and to create a new Informal Working Group on A-LCA during the 86th session (June 2022)

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1. A-LCA Meetings up to the 87th GRPE

➤ 1st : 26 ~ 28 October 2022, Hybrid meeting @ Okinawa, Japan

<OUTCOMES>

- ✓ *determine Leading Team*
- ✓ *develop the initial Terms of Reference*

➤ 2nd : 6 December 2022, Virtual meeting

<OUTCOMES>

- ✓ *should discuss on overarching aspects prior to subgroup activities*

➤ 3rd : 9 January 2023, Hybrid meeting @ Geneva, Switzerland

<OUTCOMES>

- ✓ *intensive discussion on the Terms of Reference*
- ✓ *discussed on efficient working structure*



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2. Relation with the UN’s Decarbonization Strategy

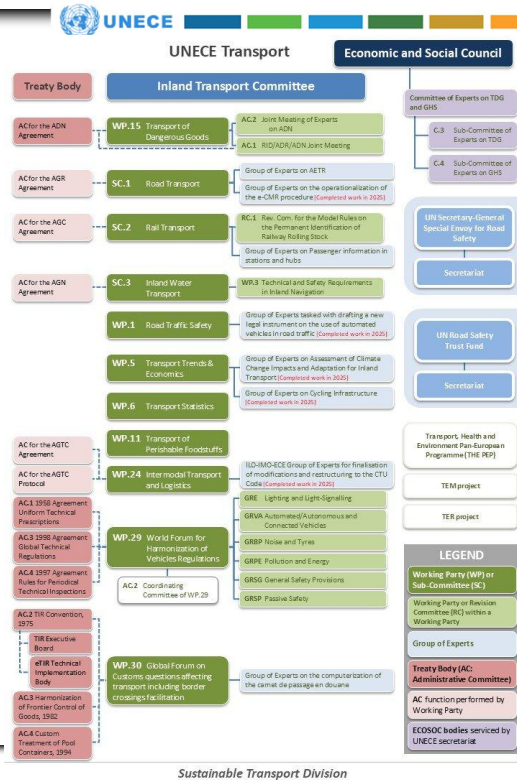
ITC Decarbonization Strategy (ECE/TRANS/2024/3) & the “big picture” of decarbonizing Transport



- The International Maritime Organization (IMO) adopted an initial strategy on reduction of GHG emissions from ships in 2018, which was updated in July 2023
- The International Civil Aviation Organization (ICAO) set a long-term aspirational goal of net zero carbon emissions from aviation by 2050 in 2022, following the setting of previous global aspirational goals
- The UNECE Inland Transport Committee (ITC) adopted the ITC Decarbonization Strategy in February 2024, with the **ambitious goal of net zero greenhouse gas emissions from inland transport by 2050**. Document [ECE/TRANS/2024/3](https://unece.org/sites/default/files/2024-03/WP.29-192-06e.pdf)
- The whole transport sector decarbonization agenda is now covered by the UN system

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2. Relation with the UN's Decarbonization Strategy



- UNECE transport aims to improve competitiveness, safety, efficiency and security
- ITC the Inland Transport Committee
- IMO the International Maritime Organization
- ICAO The International Civil Aviation Organization
- ITC
 - Road (SC.1)
 - Rail (SC.2)
 - Inland water and intermodal transport SC.3)
 - Transport of dangerous goods (WP.15)
 - Vehicle Regulations (WP.29)
 - Road safety (WP 1)
 - Border crossing facilitation (TIR)

Reference: <https://unece.org/transport/about-us>

2. Relation with the UN's Decarbonization Strategy

ITC Decarbonization Strategy Action Plan – and WP.29

Action number	Specific action	Target year	Related Objective(s)	ASI pillar addressed	Responsible bodies
1	Assess regularly actions taken in support of implementation of this Strategy, and address climate change whenever feasible, through annual sessions or dedicated seminars or workshops and report it	From 2024, annually	A. / C.	Avoid/Shift/Improve	ITC and all its subsidiary bodies
4	Take stock of existing policies or current efforts to reduce GHG emissions of vehicles. Explore the potential to harmonize regulatory tools among relevant markets, or to set tailpipe reduction targets for countries, if appropriate for them	2026	A.(a) / C.	Improve	WP.29
<p>“Develop globally harmonized methodology to determine the carbon footprint of vehicles from cradle to grave”</p>					
32	Develop globally harmonized methodology to determine the carbon footprint of vehicles from cradle-to-grave	2025	A.(c) / C.	Improve	WP.29/GRPE, with support from other WPs
33	Elaborate possible solutions to improve material and resource efficiencies in the mobility value chains such as sustainable batteries, in the design, production, use and the end-of-life stages.	2027	A (c)	Improve	WP.5 / WP.29/GRPE

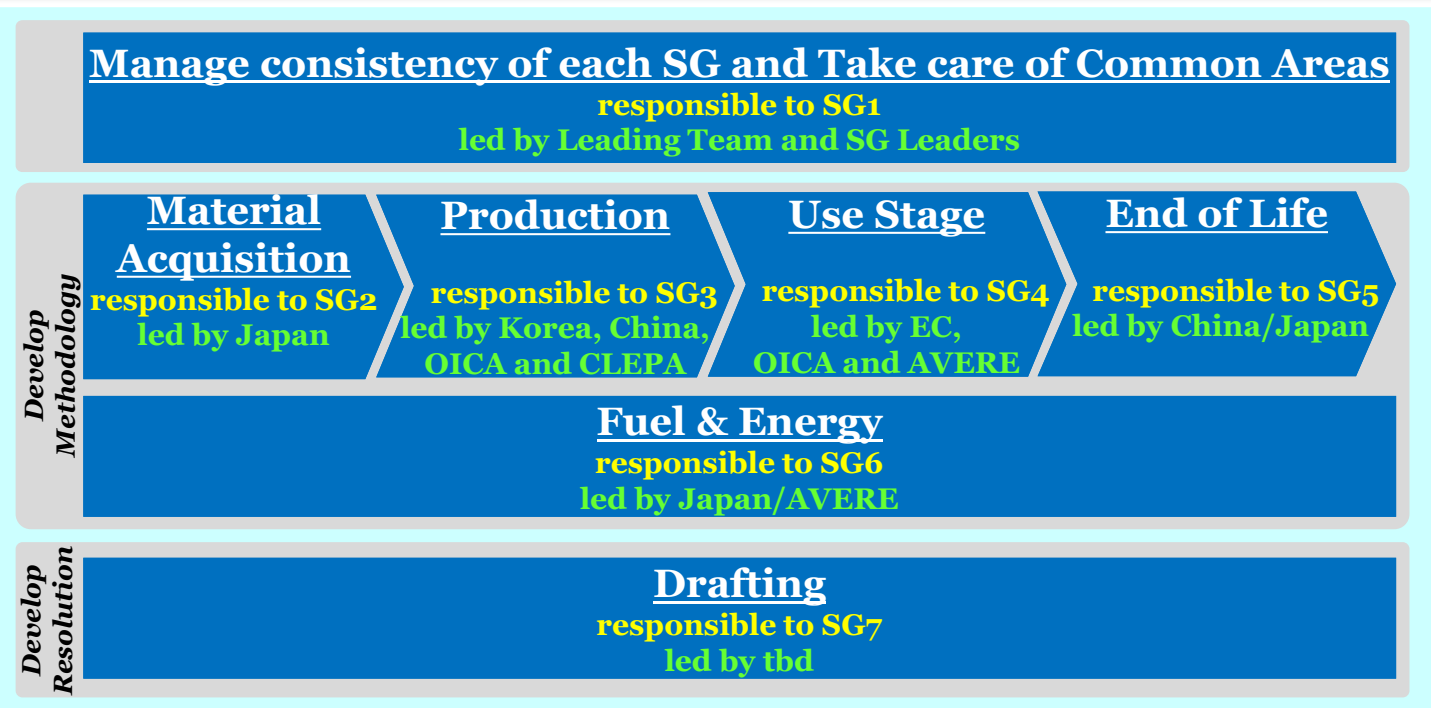
3. Key Contents of the ToR

- Objective : to develop an internationally-harmonised procedure to determine the carbon footprint of automotive products from production to use and disposal, **as a resolution** under the framework of WP.29.
- Basically, applicable to all types of road automotive products
- Working items :
 - Definition of Scope/Inventory Analysis/Life cycle impact assessment
- Timelines :
 - June 2025 : Adoption of the UN Resolution on A-LCA by GRPE**
 - November 2025 : Adoption of the UN Resolution on A-LCA by WP.29**

<still under the development>



4. A-LCA Working Structure (Until 2025)



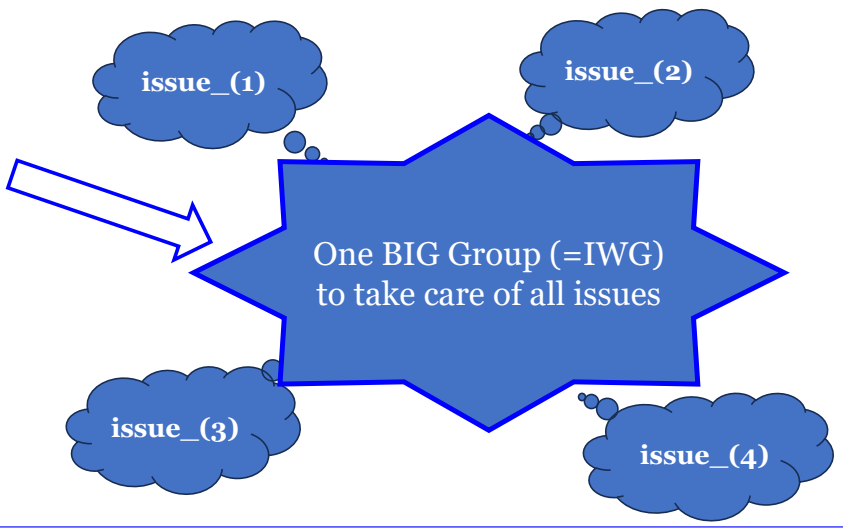
4. A-LCA Working Structure (From 2026)

Up to Now



Base on the achievement level of each SG and the involvement of all parties on the contradictory issues, considering the new working structure.

New Working Structure (Under the Discussion)

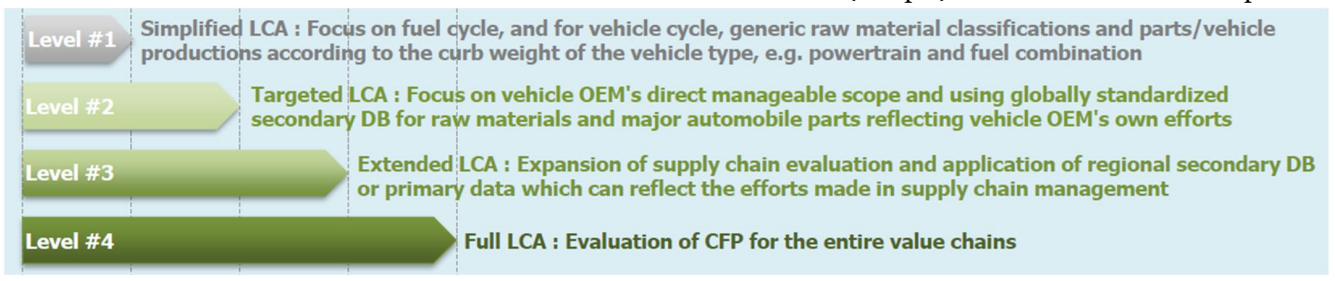


1. Pre-discussion on the specific issue under small group led by designated party
2. IWG pursues the agreement based on proposed solutions provided by small group

5. Features of the Methodology (Level Concept)

- Initiated by Korea and adopted by the IWG on May 30th, 2023
- Levels of the Methodology are classified as the purpose of CFP calculations.

(sample) definition of Production phase

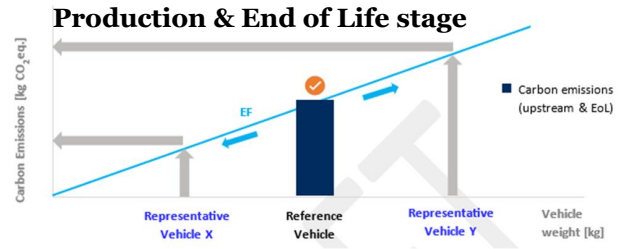


- Relatively, use of primally data in the calculation increases as level goes up.

5. Features of the methodology (Determination of CFP)

The methodology involves separately calculating each stage of the vehicle lifecycle.

The concept is to combine the calculated each result for the given vehicle.



Due to a variety of new elements such as life stage specific family definition, unique determination process, reference vehicle definition and so on, a research phase to follow is considered.

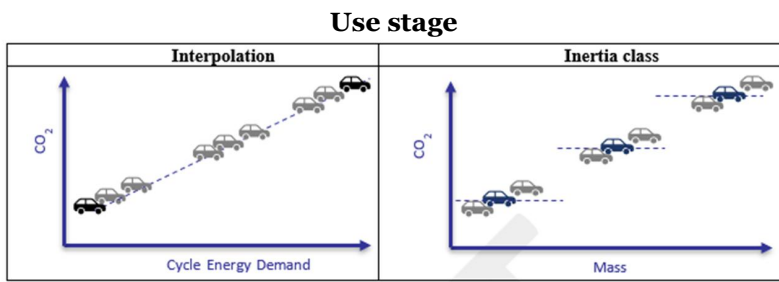


Figure 3 explanation of interpolation and inertia approach.

6. Progress of Work

	2022	2023			2024		2025		
GRPE	86 th Workshop	87 th	88 th	89 th	90 th	91 st	92 nd		93 rd
		★ Approved Terms of Reference							withdraw to request GRPE for approval
A-LCA IWG	🇯🇵 ★	🇨🇭	🇧🇪	🇨🇭	🇨🇭 🇰🇷	🇧🇪 🇨🇭	🇯🇵 🇨🇭	🇺🇸	🇧🇪 🇨🇭
Overarching aspects	1 st IWG Meeting @ Okinawa/Japan								
Develop methodologies							Informal Documents	Working Documents	
Drafting									

we are **HERE** ↓

	2025	2026		
GRPE				
		→ 94 th withdraw to request GRPE for approval → 95 th		
A-LCA IWG		🇨🇭		🇨🇭
Develop methodologies	Working Documents			
Drafting				

<OUTCOMES>

- ✓ Submitted the Working Document with square brackets on open items
- ✓ Intensive and constructive discussion leads the tremendous progress but still needs more technical/political discussion on several topics

Thank you!