

# Clarification on level concept idea

2023. 5. 30

# Background of the proposal of the level concept

## ▪ Objective of A-LCA IWG in ToR

- This resolution can be used to help make policy and can encourage automotive industries to reduce carbon footprint, also considering energy use. The methodology shall be developed respecting the principles of transparency and consistency. It shall also strike a balance between the accuracy and the workload considering the complex supply chain of the automotive industry.

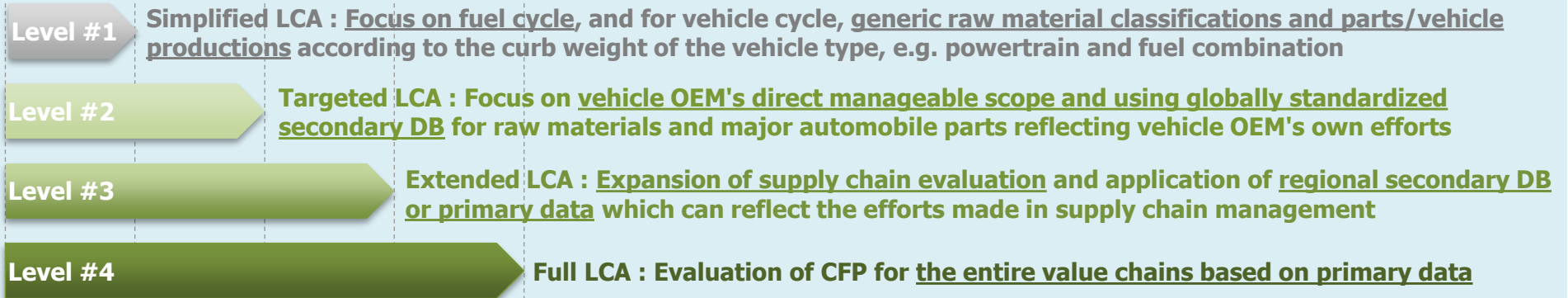
## ▪ Background of the proposal

- 1. Limitation of Simplified LCA :** Excluding supply chains and using mainly secondary data makes it difficult to verify a company's carbon reduction efforts
- 2. Challenges of immediate application of full LCA**
  - Challenges in evaluating carbon footprint beyond the direct control of automotive OEMs
  - Difficulty in setting system boundaries due to the complexity of the supply chain
  - Difficulty in establishing data for the whole supply chain in the A-LCA IWG timeframe

**It is important to make sure that A-LCA IWG should be able to provide the “workable” guideline at the end of the activity in 2025.**

# Reminder: Level concept of vehicle cycle proposed in 6<sup>th</sup> session

## ❖ (Example) Level concept

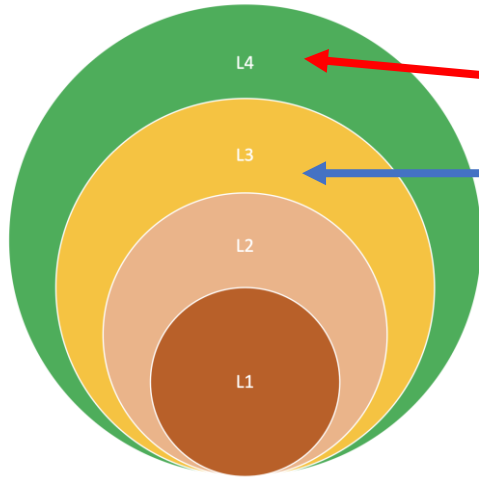


## (Note)

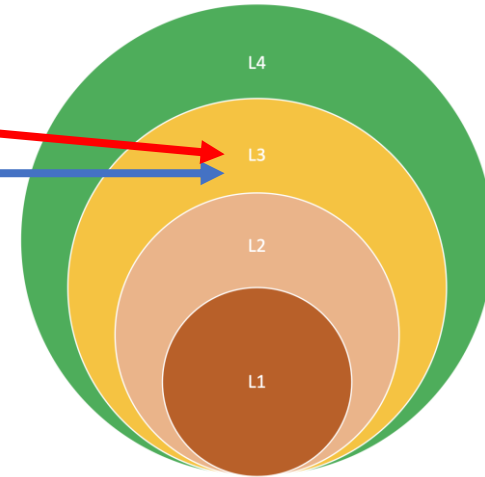
- LCA practitioners should report the level of their analyses.
- Different levels can have their intended goals and applications, based on the scope setting, e.g., system boundary, data quality requirement, etc.

# Transparency and consistency with different levels

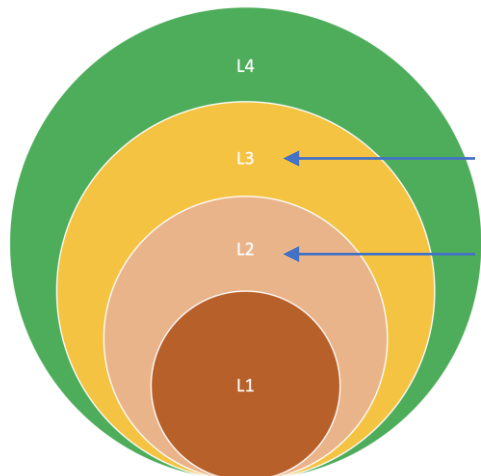
Company 1, Model A



Company 2, Model B

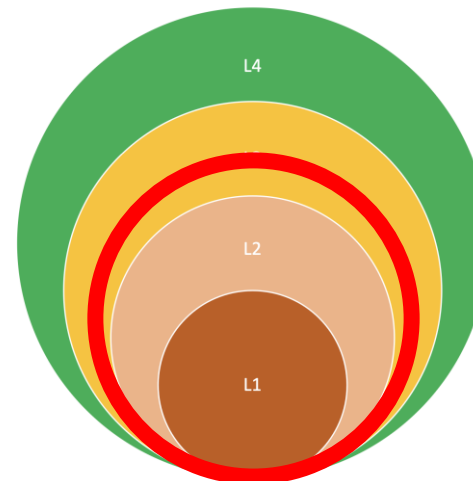


**Different levels CANNOT be compared.**



**L3: 100% regional DB**

**L2: 100% global DB**



**L2+(?):**

**80% global DB  
+ 20% regional DB**

**Levels are DISCRETE, not continuously changing.**

# In the final PCR,

- The final outcome is 1 rulebook with 4 guidelines for 4 levels (if there are four levels).

PCR

**Level 1**

Material guideline

Parts&vehicle production guideline

....

**Level 2**

Material guideline

Parts&vehicle production guideline

....

**Level 3**

Material guideline

Parts&vehicle production guideline

....

**Level 4**

Material guideline

Parts&vehicle production guideline

....

Or

PCR

Material guideline

**Level 1**

**Level 2**

**Level 3**

**Level 4**

Parts&vehicle production guideline

**Level 1**

**Level 2**

**Level 3**

**Level 4**

....

**Level 1**

**Level 2**

**Level 3**

**Level 4**

# Next steps

## **<Step 1> IWG**

**IWG should decide whether to accept the level concept or not.**

## **<Step 2> IWG**

**Once approved, IWG can discuss (initial) goal and applications expected for different levels. (Reminder: These goal and applications can be changed later on, iteratively as detailed guidelines are developed in subgroups.)**

## **<Step 3> SG <-> IWG (iterative process)**

**Subgroups develop guidelines for different levels.**

**In the whole IWG, everyone will jointly discuss those guidelines from different SG's, in order to ensure "transparency and consistency" and "balance between the accuracy and the workload".**

**Thank you!!**

# Appendix

## ▪ Regarding stage of raw material extraction and processing

✓ Establishing classification criteria for raw materials and gradually refining the carbon emission factors for each material

\* It is being considered that primary data could be available in the near future, as product LCAs are being rapidly conducted due to the fact that most raw material suppliers are global companies

01

### ✓ Minimizing evaluation of pre-manufacturing stages of vehicles

- e.g. Calculation based on the generic vehicle and material composition with certain type of fuel/powertrains and the CFP proportional to the vehicle curb weight

▼ + Analysis of raw materials

02

### ✓ Establishment of criteria for classifying raw materials and determination of carbon intensities for each raw material (classification for raw materials: IMDS)

- e.g. PCR Draft Appendix I of Japan(A-LCA-03-04\_PCR\_draft)

▼ + Regional-based secondary DB and primary data partially

03

### ✓ Use of regional GHG emissions of raw materials + recognition of primary data

- Use of secondary DB of raw materials by country and region is given priority  
- Use of primary data accepted if supporting documentation is provided

▼ + Mainly based on primary data

04

### ✓ Primary data has priority over other data sources

- Public disclosure of usage rate between primary data and secondary DB  
(e.g. 49% usage of secondary DB)



# Appendix

## ▪ Regarding parts manufacturing stage

- ✓ Starting with reflecting high-carbon emitting parts to establish vehicle parts LCA system and then expanding to cover all parts for a full bottom-up approach
- \* In order to facilitate the coverage expansion, support for development of vehicle parts LCA calculation/database system might be necessary

01

### ✓ Minimizing evaluation of pre-manufacturing stages of vehicles

- e.g. Calculation based on the generic vehicle and parts production with certain type of fuel/powertrains and the CFP proportional to the vehicle curb weight

▼ + Incorporation of major parts in the assessment

02

### ✓ Select parts with high carbon intensities in the production stage and use of secondary DB for reflecting their GHG emissions

- e.g. PCR Draft Appendix I of Japan(A-LCA-03-04\_PCR\_draft)

▼ + Expanding the scope of parts application vertically

03

### ✓ Including carbon intensities of parts that have PCR or LCA regulations

- CFP of the parts determined by cradle-to-gate LCA results based on relevant regulations
- Other parts are following level 2 approach

▼ + Applying to all parts using bottom-up approach

04

### ✓ Applying total GHG emissions of all parts using bottom-up approach

(Raw material suppliers → Tier-n → Tier 2 → Tier 1)

- Incorporating cradle-to-gate GHG emissions based on LCA for all parts into the vehicle