

## **Draft Terms of Reference of Informal Working Group on Life Cycle Assessment (IWG on LCA)**

### **1. Introduction**

- 1.1. The Paris Agreement has set ambitious targets to limit global warming to well below 2, preferably to 1.5 degrees Celsius, compared to pre-industrial levels. To achieve this long-term temperature goal, countries aim to reach global peaking of greenhouse gas emissions as soon as possible to achieve a climate neutral world by mid-century. The transport sector is a major contributor to global GHG emissions and road transport has the vast majority of the overall transport sector emissions.
- 1.2. To be able to have comprehensive, comparable and consistent values for the carbon footprint over the whole life of vehicles put on the market across the globe, from material extraction, manufacturing, to use and dismantling / recycling at the end of its life, it is desirable to define and develop an internationally unified method for carbon life cycle analysis (LCA).
- 1.3. ISO14040 series has been in effect since 2006 as an international standard on life cycle assessment for environmental management, and automobile manufacturers have been publishing results of LCA in accordance with these ISO standards for several types of vehicles.
- 1.4. However, the ISO standards states that the scope of investigation and the preconditions for conducting LCAs be determined by the investigator such as automobile manufacturer, and since each investigator conducts LCAs according to their own method, an internationally harmonised LCA methodology designed for automobile industry with global business activity is needed.

### **2. Objective**

- 2.1. The IWG on LCA will be an open structure which will enable the exchange of information and experiences on relevant regulations, policy measures and standardization efforts. It is intended that the discussions will encompass all types of road vehicles with different technologies for fuels and vehicles.
- 2.2. The general consensus is that EVs have superior environmental performance to conventional vehicles with fossil fuel in usage stage, but the methods of measurement of CO<sub>2</sub> emissions of their life cycles is still not defined under both the 1958 Agreement and the 1998 Agreement. The objective of the IWG on LCA is to develop an internationally-harmonized procedure to measure carbon footprint of different technologies for fuels and vehicles from production to use and disposal as a new mutual resolution.
- 2.3. The IWG shall draft recommendations/guidelines on LCA methodology that can be used for CPs to help make policy and can encourage automotive industries to improve carbon footprint. The methodology shall be transparent in accordance with ISO 14040/44, and shall balance the accuracy and workload considering the complex supply chain of automotive industry.

### **3. Working items**

#### 3.1. Definition of Scope

- (a) Product systems to be covered by the LCA methodology shall be defined. Breakdown of each product system may vary per vehicle category based on reviews of the vehicle's manufacturing process.
- (b) System boundaries shall be defined.

#### 3.2. Inventory Analysis

- (a) Primary data and secondary data (e.g. IDEA, ecoinvent, ELCD database, NREL) for each stage shall be defined. (Data sharing/exchange system among the supply chain is out of scope of the IWG)
- (b) The assumptions and scenarios for the activities in each stage shall be defined.
- (c) Quality requirements for primary data shall be defined. Quality requirements may include the temporal scope, geographical scope, technical scope, accuracy, completeness, representativeness, consistency, reproducibility, etc. In addition, data should be collected with a high degree of accuracy in processes with significant impacts on CO<sub>2</sub> emissions. On the other hand, cut-offs should be applied for processes and input with small impacts on CO<sub>2</sub> emissions.

#### 3.3. Assessment of Life Cycle Inventory

- (a) The methodology for calculating CO<sub>2</sub> emissions shall be defined. Any type of efforts and activities to have a positive/negative impact on CO<sub>2</sub> emissions shall be reflected into this methodology.
- (b) The format of the LCA report shall be defined.

### **4. Timeline**

#### 4.1. The target completion date for the work of the IWG on LCA and possible adoption of the recommendation shall be the session of WP.29 in November 2025.

- (a) Jun. 2022: Workshop on LCA organized by GRPE
- (b) Jan. 2023: Approval of Terms of Reference to establish IWG on LCA by GRPE
- (c) 2023-2025: Meetings of IWG on LCA, with regular reporting to GRPE and WP.29
- (d) Jun. 2025: Adoption of the recommendation on LCA by GRPE
- (e) Nov. 2025: Adoption of the recommendation on LCA by WP.29

### **5. Rules of Procedure**

#### 5.1. The following rules of procedure describe the functioning principles of the new informal working group.

- (a) The IWG is open to all experts from any country or organization of WP.29 and its subsidiary bodies. A limitation of the number of participants for the IWG is not foreseen.
- (b) Chairs (Japan, Republic of Korea and ...(TBD)) and a Technical Secretary (Japan(TBD)) will manage the IWG.

- (c) The official language of the IWG will be English.
- (d) All documents and/or proposals shall be submitted to the secretary of the group in a suitable electronic format, preferably in line with the UNECE guidelines in advance of the meetings.
- (e) The IWG shall meet regularly in conjunction with the GRPE sessions, presuming the availability of meeting rooms. Additional meetings will be organized upon demand.
- (f) An agenda and related documents will be circulated to all members of the informal working group in advance of all scheduled meetings.
- (g) The work process will be developed by consensus. When consensus cannot be reached, the Chair of the informal group shall present the different points of view to GRPE. The Chair may seek guidance from GRPE as appropriate.
- (h) Draft meeting reports will be available after each meeting, and presented for approval at the following one.
- (i) The progress of the informal working group will be reported to GRPE orally or as an informal document by the Chair or the secretary.
- (j) All documents shall be distributed in digital format. The specific LCA section on the UNECE website shall be used for this purpose.