
1. GENERAL INTRODUCTION

Reminder of the context

At GRBP 73 in January 2021, the experts from EC, ETRTO and OICA reported on their studies on sound level limits (GRBP-73-23, GRBP-73-11 and GRBP-73-25, respectively). To coordinate such initiatives, GRBP decided to establish a taskforce (TF). GRBP considered that TF should address the sound level limits of UN Regulation No. 51 and, at a later stage, No. 41.

- Chair: France – Secretary: OICA
- Guidelines of this TF were established by the group and approved as [GRBP-74-03 Rev.1](#).

The **decided name of this TF is TF-VS (Vehicle Sound)** to consider future sound emissions in accordance with UN-R51 and UN-R9, 28, 41, 59, 63, 92, 117, 138, 165.

The **aim of the group** is:

- to have a vehicles' sound forum for discussions
- to make a review of the different studies/works with identification of pro/cons through a holistic approach,
- to review the new information for example studies about new technologies and tyre noise related to UN-R51-03 including phase 3,
- to provide a technical report to contribute to any work on future sound emissions.

The **scope of the group** includes M, N and L categories of vehicles and any fields with impact on Real Sound emissions such as tyres, ASEP, road surfaces, interaction between L_{EQ} and L_{MAX} , electrification, vehicles' fleet impact ($L_{DEN} - L_{NIGHT}$), soundscape, road mapping, measurement uncertainties ...

The TF-VS shall:

- for M and N categories vehicles
 - Identify available and upcoming studies,
 - Identify the data available,
 - Review and analyse these studies/data including effect of Phase 3,
 - Work on background information to enable third parties to deal with impact assessment including single vehicle's individual sound emission and based on the most recent regulatory framework
 - Identify the interactions between vehicles sound emissions approvals and environmental noise,
 - Determine the importance of all this information,
 - Define action plans if needed,
 - Propose any useful improvements or any additional actions to any official bodies.
 - Organize the same work for L category vehicles.
- TF-VS homepage: [Task Force on Sound Limits \(TF SL\) - Transport - Vehicle Regulations - UNECE Wiki](#)

Calendar of the first 11 sessions of the TF-VS

- 01st TF SL: March 24, 2021 (TFSL-01-07)
- 02nd TF SL: May 26, 2021 (TFSL-02-12)
- 03rd TF SL: July 12-13, 2021 (TFSL-03-08)
- 04th TF VS: September 13-14, 2021 (TFVS-04-16)
- 05th TF VS: October 26-27, 2021 (TFVS-05-07)
- 06th TF VS: December 17, 2021 (TFVS-06-04)
- 07th TF VS: February 07, 2022 (TFVS-07-15)
- 08th TF VS: April 04, 2022 (TFVS-08-10)
- 09th TF VS: May 24, 2022 (TFVS-09-08)
- 10th TF VS: July 12, 2022 (TFVS-10-08)
- 11th TF-VS: September 09, 2022 (TFVS-11-08)

Participants to the first 11 sessions of the TF-VS

- **Contracting Parties:**
China, European Commission (DG-GROW & DG-ENV), France, Germany, India, Italy, Japan, Spain, Switzerland, The Netherlands, United Kingdom.
- **NGO's:**
CLEPA, ETRTO, EUWA, IMMA, ISO, OICA.
- **GUESTS:** (independent experts)
Aristotle University, ATEEL, BRUITPARIF, FEDRO, FEV, HS Data analysis & Consultancy, IDIADA, JARI, TNO, Brussels Env., ...

Outcome of the TF-VS group during the 11th Session

A lot of materials to improve noise emissions and their impact in real life have been presented to the different sessions of the TF-VS.

During the 11th session, the group supported that a report to give an overview and a common view on what is the situation would be helpful to decide how the TF-VS should continue to work and what could be its future work.

To make this report, a subgroup was decided with as volunteers:

- France: Serge FICHEUX, Romain BARBEAU,
- Japan: Takehiro ITO, Yoshihiro SHIRAHASHI, Yoshihisa TSUBURAI,
- The Netherlands: Jan Sybren BOERSMA,
- ETRTO: Michael STEFFAN,
- IMMA: Edwin BASTIAENSEN, Alex DESPLENTER,
- OICA: Klaus NEUHAUS, Per-Uno STURK, Françoise SILVANI (pilot of the subgroup).

How the work has been done – approach followed by the subgroup

The subgroup had 15 meetings from November 2022 to June 2023.

NB: See figure below for illustration of the approach chosen by the subgroup.

1. During the 11 sessions of the TF-VS, there were 54 presentations on different topics such as:
 - Road surfaces,
 - Studies on noise emissions of M/N/L vehicles,
 - Test methods,
 - Noise mapping
 - Noise camera/sonar experimentation,
 - Test campaigns,
 - General ideas, studies & considerations,
 - Cross matrix to improve traffic noise scenario and test procedures.

From these 54 presentations, the subgroup decided to combine them as much as possible by subject/theme. This step led to 25 subjects/themes.

2. An 'individual sheet' (targeted in 2 pages) was built for each of these 25 subjects/themes to:
 - Identify the main messages shared during the different sessions of the TF-VS,
 - Make a summary of the presentation(s),
 - Add points discussed at the TF-VS,
 - Identify the references related to the concerned subject/theme.

The result is the Part 4. to this report.

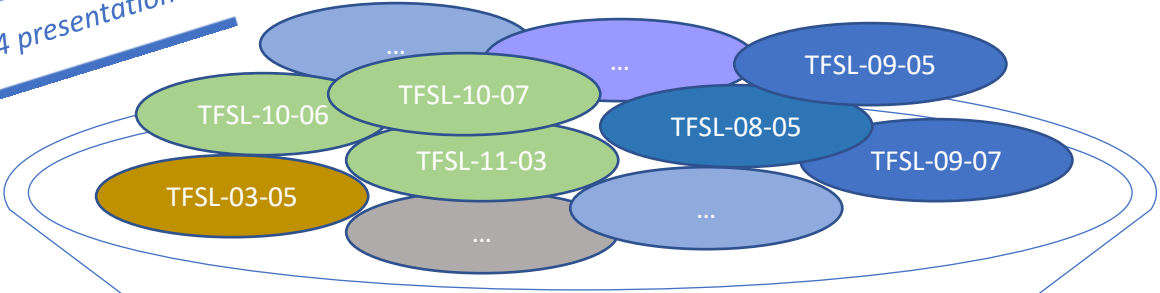
Through this exercise, the subgroup identified several key points. In the next step, these key points were combined and led to 5 key domains: vehicle, driver, enforcement, immission, tyres/roads.

3. For each of the 5 key domains, the subgroup created a sheet to:
 - Identify the general findings/statements explained during the presentations/reports to the TF-VS, and
 - Identify the needs & questions for potential further considerations by the TF-VS.

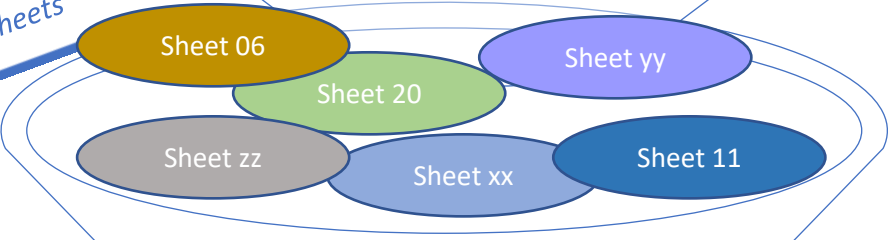
The result is in the Part 3 to this report.

The needs & questions for further considerations should be discussed at next official session of the TF-VS for decision regarding the potential future work of the group.

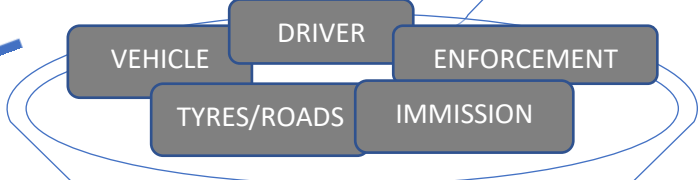
54 presentations



25 individual sheets



5 key domains/ points



**General findings/
statements**

**Needs & questions for
further considerations**