



OICA Position Paper/Concern on
draft UN R138.02
after drafting group meeting October 04th, 2023

TF QRTV
08.11.2023

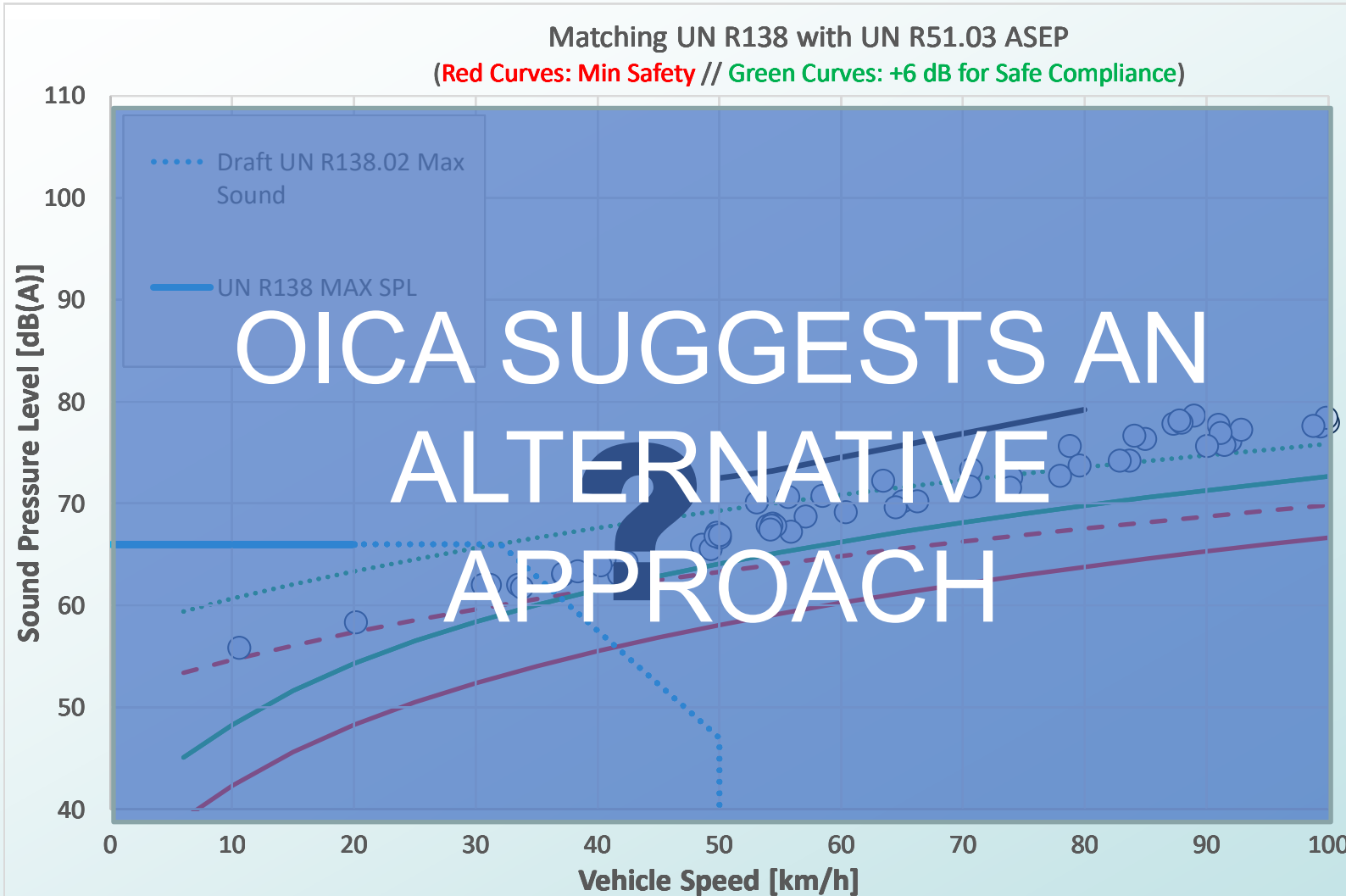


OICA concerns

- OICA is concerned that the initial concept for a 2-stage approach as agreed in the guidelines among all stake holders in TF-QRTV has been given up for going immediately to a new series of amendments.
 - We deem this step pre-mature, as the draft UN R138.02 raises more questions and opens grey zones (e.g., mixing up whole vehicle levels and component levels), rather that it helps to solve issues.
 - Considerations on safety have not been assessed – Environmental limits proposed may preclude future safety improvements.
 - A statement of compliance without clear test specifications cannot be given by manufacturers due to legal risk.
 - There are non-validated new definitions (natural and artificial sound) regarding the maximum sound level.
- We do not understand the benefit of the AVAS sound cut-off.
 - What is the environmental benefit? For societies' health? For “single vehicle annoyance”?
 - See next slide.



OICA Concern with Draft UN R138.02



1. Draft UN R138.02 proposes to mandate a fade-out of AVAS sound after 32 km/h to a level of 47 dB(A) at 50 km/h. Whole vehicle limits have been changed to AVAS component limits.
2. Draft UN R138.02 considers to require compliance with UN R51.03 ASEP above 50 km/h.
3. As OICA has shown during the last TF-QRTV meeting, minimum safety is neither limited to the area up to 20 km/h nor to constant speed conditions only.
4. For compliance, a manufacturer always needs a margin to account for test- and production variation.
5. OICA is concerned
 - that a mandatory fade-out after [32] km/h with a complete shutdown of an AVAS after [50] km/h may jeopardize safety, as it eliminates the chance for manufacturers to balance-out the vehicle individual needed sound pattern for safe perception of the vehicle.
 - Hybrids may have conflicting requirements between UN-R 138 and UN-R 51, as these vehicle will have to comply with full ASEP provisions.

Note: The UN R138 max. overall sound pressure level is 75 dB(A) at a distance of 2 m, corresponding to 66 dB(A) at 7,5 m.



What could be achieved with a bit more time for finding a solution acceptable to all stakeholders

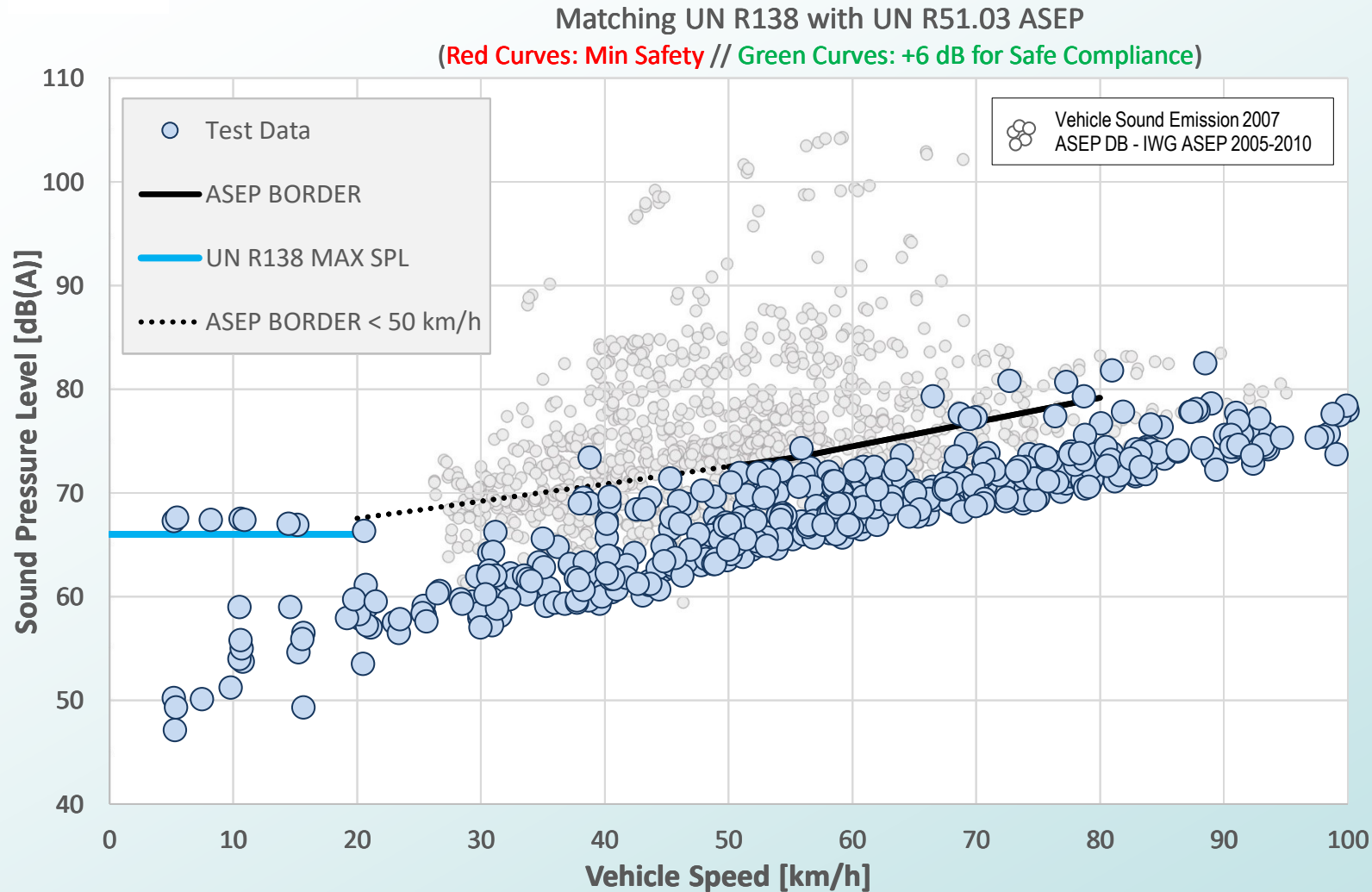
- OICA proposal can be applied sooner by splitting safety and environment requirements by supplement in each regulation (R51 and R138).
 - Avoid regulatory conflict between safety and environmental aspects – sufficient margin between sound levels for R138 and R51.
Each discipline requires individual scientific approaches and testing methods.

- Update R51 with a supplement to include electric vehicles with ASEP in Annex 7
 - Operation range is determined by environmental considerations.
 - The maximum level and speed range is covered by R51.03 Annex 7

- Update draft for R138 to work as a supplement – remove anything that requires a new series:
 - Delete ambiguous definition “artificial sound” and “natural sound”
 - Consistently address whole vehicle sound throughout the text
 - Avoid requirement for manufacturer compliance statements without test procedures



OICA Draft Concept



1. OICA suggests (still draft) to mandate for EVs fitted with sound enhancement systems operational after [x] km/h compliance with UN R51.03 Annex 7 ASEP provisions starting from 20 km/h.
 - This will connect and close any open area between UN R138 and UN R51.
2. This provision will sufficiently ensure, that EVs are designed to not become overly loud.
3. It should be noted that already current ASEP works sufficiently well.
4. EVs are substantially below the quietest vehicle that have been used during the ASEP development work of the years 2005-2010.
5. Even when equipped with sound enhancement systems operating beyond the scope of UN R138.01



OICA position in short

- Concerning items of draft R138.02
 - Jumping to "step 2" would postpone improvements indicated in the 74th and 75th Sessions of GRBP
 - Safety is not validated/ensured for speeds above 32 km/h.
 - Manufacturer's compliance declaration pose legal ambiguity while lacking defined test method.
- Possible solutions and OICA proposals
 - First step: introduce supplements that
 - **address BEVs with extended* Sound Enhancement Systems** by R51.03, Annex 7 (ASEP).
 - **refrain from changes to requirements** – limit values, speed range and new definitions of sound types in R138
 - **introduce improvements to R138.01** suggested by ISO, France.
 - Second step: mature the new series of amendments that
 - address environmental aspects through Annex 9 (RD-ASEP) of R51 (await analysis of the monitoring data).
 - secure/improve safety aspects through R138.

* "extended" means sound exceeding the mandatory operation range (RD-ASEP draft definition to be refined)



Thank you!