



Data Analysis
and
Consultancy

Transmitted by the expert from EC

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Study on sound level limits of M- and N-category vehicles

On behalf of the European Commission

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Project outline

- **Consortium performing the work:**
 - EMISIA – Greece
 - FEV – Germany
 - TNO – Netherlands
 - Heinz Steven Data Analysis and Consultancy (HSDAC) - Germany
- **Overall framework service contract manager:**
 - LAT/AUTh – Greece
- **Project duration is 19 months**
 - Started in December 2019
 - Expected to be completed by June 2021

Subject and aim of the study

To study the sound level limits of M- and N-category vehicles and investigate on such limits update

Background

- M- and N-category vehicles constitute a big part of the European fleet; as a result, they contribute significantly to the overall sound emissions
- Consequently, sound emission limits are legislated and need to represent the state of the art sound emission levels
- There is legal obligation of the Commission for a detailed study on sound level limits by 1 July 2021 and submit, as appropriate, a legislative proposal – Regulation (EU) No 540/2014

Objectives

- Investigate the current sound emission levels of M- and N-category vehicles
- Propose possible new (improved) sound level limits for the next phases of the Regulation (EU) No 540/2014 in the coming years
- Overall: protect the environment and human health and contribute in the reduction of the so-called 'noise pollution' and real-world traffic noise

Project tasks

Task 1 - Estimate of sound level limits for all M- and N-category vehicles

- Feedback gathering procedure with questionnaire to stakeholders
- Literature review to explore the current state-of-the-art sound emissions control technology

Task 2 - Verification of vehicles' sound level limits

- Actual vehicle testing to establish current sound levels of state-of-the-art vehicles per each category (according to UN R51 requirements)

Task 3 - Noise source ranking

- Investigate the sound levels of tyres and their influence to the overall sound levels (according to UN R117)
- Quantify the contribution of powertrain, transmission and exhaust system to the sound levels

Task 4 - Cost-benefit analysis (CBA)

- Several scenarios in order to assess the economic feasibility of potentially modified sound level limits

Task 5 - Validation tests

- Validate the possible new limits, which will be based on the results from previous Tasks 1,2,3,4

Task 6 - Proposal for limit values and reporting

- Final proposal for possible new sound level limits of M- and N-category vehicles and their tyres

Progress – current status

Task 1:

- Questionnaire already sent to stakeholders
- Some answers already received, feedback expected until 31 January 2020
- Literature review on sound limits (work in progress)

Task 2:

- Ongoing discussions for vehicle selection for the actual tests (expected to start in March 2020)

Task 4:

- Gathering the necessary information for performing the CBA