

General overview of vehicle noise in Japan

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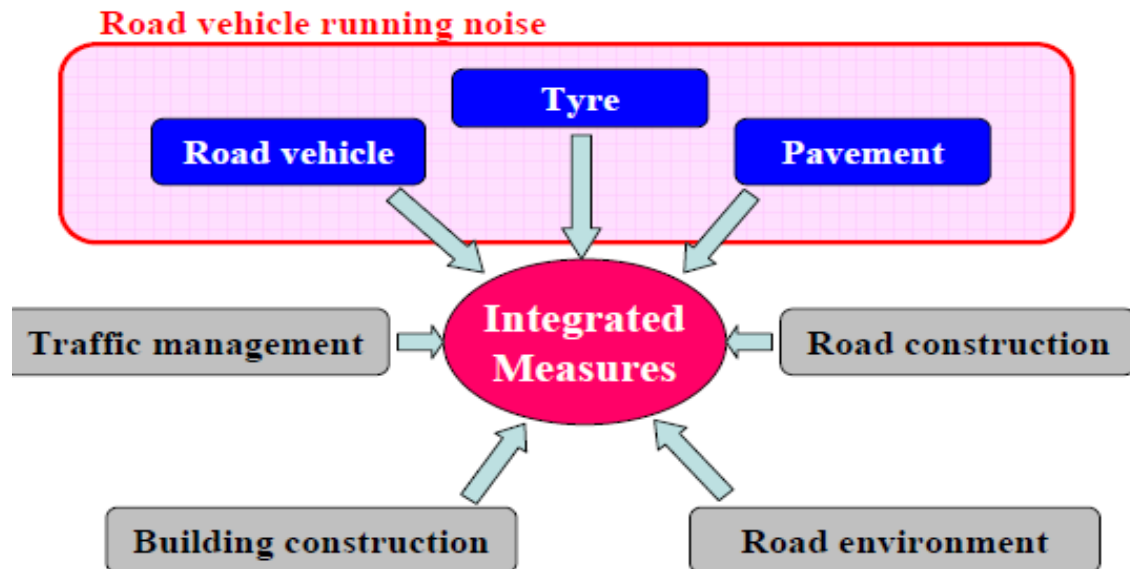
◆ Targets

- ✓ To achieve 100% in the EQSs (Environmental Quality Standards) for Road Traffic Noise
- ✓ To reduce the number of complaints related to vehicle noise

EQS: An administrative goal set as a standard that should be maintained for the protection of human health and the preservation of the living environment, and the standard value is set for each area type and time category.

◆ Approach (Holistic approach)

Integrated noise reduction measures



<For new vehicle>

Constant speed test regulation(1951)

- ✓ Limit value for driving at a constant speed (50 km/h)

Acceleration test regulation (1971)

- ✓ Limit value for driving with acceleration from 50km/h
- ✓ R41-04 for L-category (2014)
- ✓ R51-03 for M- and N-category (2016)

<For vehicle in use>

Regulation for replace-mufflers(2010)

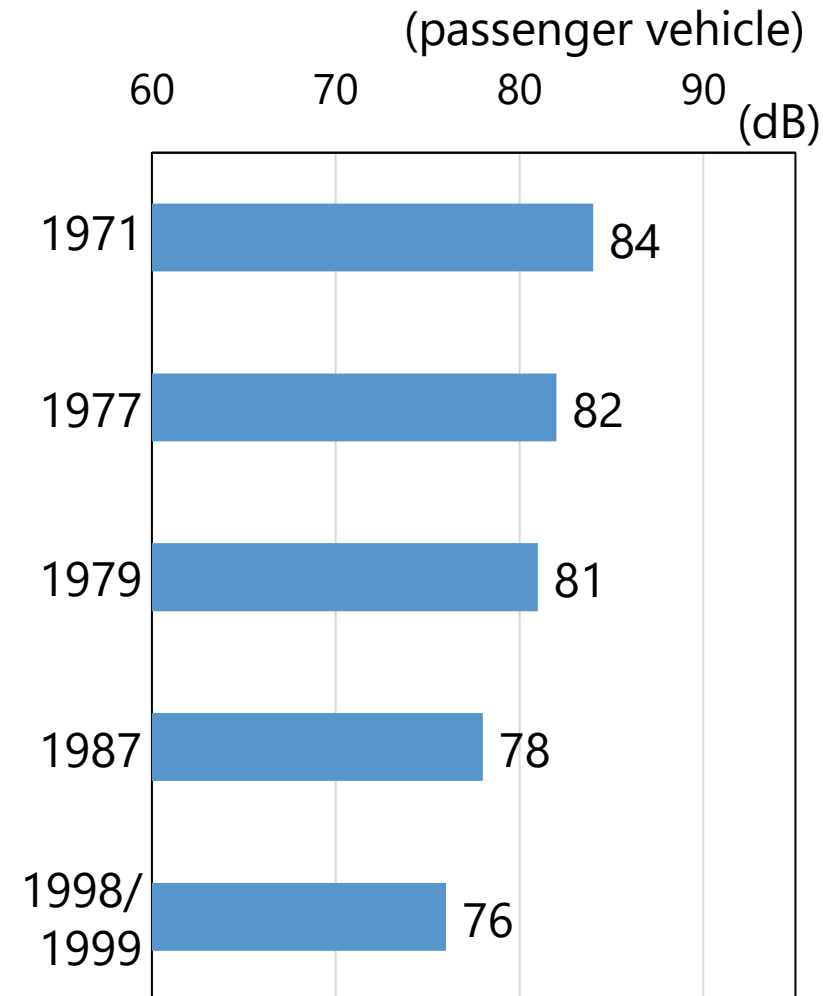
- ✓ Obligation to have a noise prevention capability in mufflers for accelerated driving

<For both>

Stationary test regulation (1986)

- ✓ Limit value at 50cm from the muffler at a certain motor speed
- ✓ Relative value regulation (2016)

Transition of limit value for accelerated driving



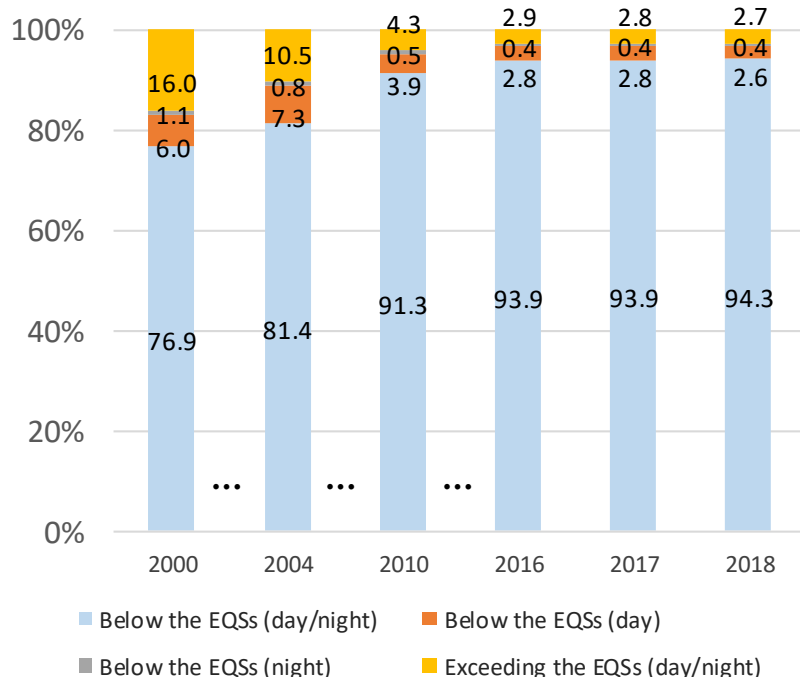
Current situation of vehicle noise

✓ The achievement status of the EQSs of Road Traffic Noise has gradually improved, but has not reached 100% yet.

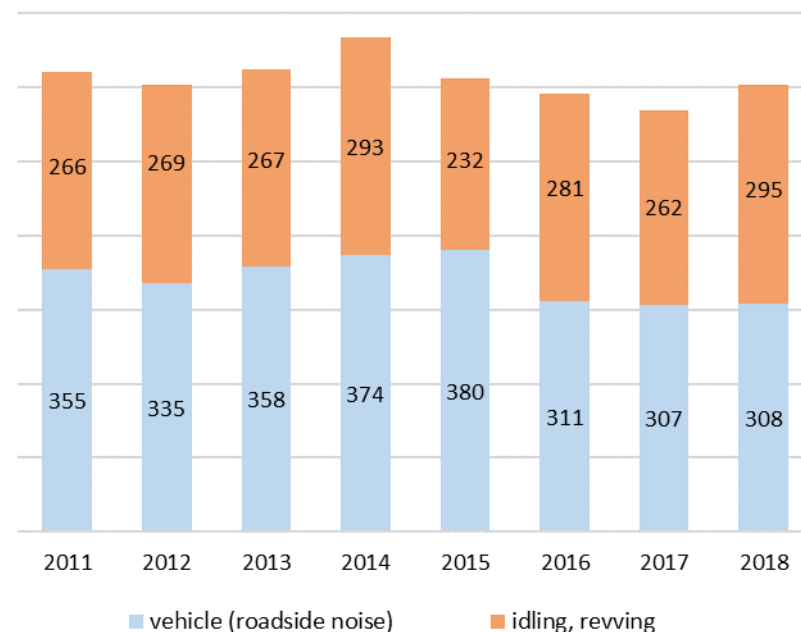
* EQSs of RTN: The standard value of the space near the road that carries the main traffic is 70 dB or less during the day and 65 dB or less at night. (Evaluation method is L_{Aeq})

✓ The number of complaints of vehicle noise has increased or decreased depending on the year, but has not been decreasing in recent years.


Achievement status of the EQSs for RTN



Number of complaints related to vehicle noise



Future sound limit values








- ✓ Not only the role of phase3 of R51-03, but also other noise reduction measures such as that focusing on tyre, illegal muffler, etc. are important.
- ✓ In terms of R51-03, before introducing phase3, its effect should be verified.  TF-SL should be included verification of phase3 limit and timing of its introduction.

<The result of GRB 60th session in 2014>

GRB noted that, following the entry into force of phase 2 for new types of vehicles, EU would undertake a detailed study to review the limits of phase 3 and to correct these values, if deemed to be necessary. Other Contracting Parties were invited to conduct similar studies in the future and to transmit their outcomes to GRB.

- ✓ The following studies are now being conducted in Japan, and the results will be reported to TF-SL.
 - To assess the effectiveness of phase3 introduction at the points exceeding EQSs, by using a prediction model
 - To conduct a survey of automobile manufacturers regarding the impact of phase3 introduction, etc

- ✓ In Europe, US, China, Japan, and other countries, the “electrification” movement is accelerating.
- ✓ In some countries, gasoline passenger vehicles may no longer be sold in the 2020s ~ 2040s.
- ✓ Future limit values should be thoroughly discussed when and for what types of vehicles to be introduced.

UK		Ban on sales of ICE by <u>2030</u> (HEV sales banned in 2035)
France		Ban on sales of ICE by <u>2040</u>
Norway		Ban on sales of ICE by <u>2025</u>
Denmark		Ban on sales of ICE by <u>2030</u> (PHEV sales banned in 2035)
US(California)		100% BEV, FCEV sales by <u>2035</u> (Declaration from the governor of California)
China		25% PHEV, BEV, FCEV sales by <u>2025</u>
Japan		100% HEV, PHEV, BEV, FCEV sales by <u>2035</u> (Declaration from the Prime Minister)