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Environmental Noise in the European Union

UN ECE WP29.GRB 66

Genève – 5 September 2017

Marco PAVIOTTI,
European Commission, DG Environment
#NoiseEU

Noise in Europe today





- ➤ More than 100 million people affected by noise from traffic
- ➤ At least 16 000 cases of premature death in Europe each year (real figure is higher)
- 2nd most dangerous environmental hazard to people's health

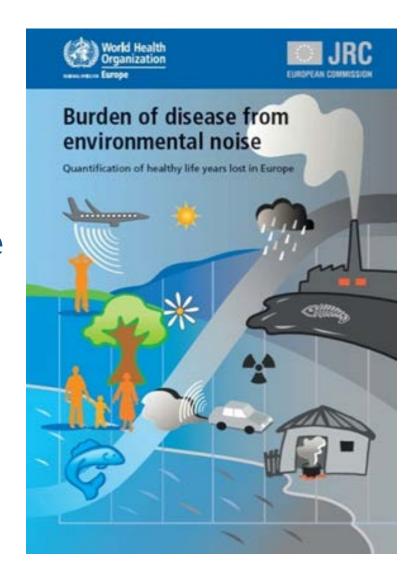
Health effects



Annoyance

Sleep disturbance

Cardiovascular diseases



Where do we want to go?





Environment Action Programme to 2020 'Living well, within the limits of our planet'

significantly decrease noise pollution in the Union, moving closer to levels recommended by the WHO, by 2020

EU regulatory framework





- ➤ Directive 2002/49/EC: achieve a common European approach to avoid, prevent or reduce the effects of exposure to environmental noise harmful for health
 - ➤ Actions: noise mapping + action planning in 5-year cycles
 - > Excludes: limit values + prescribed measures



FNVIRONMENT

European Commission > Environment > Noise

Legal compliance Home Policies Funding -News & outreach

Environmental noise Noise in Europe Health effects of noise ٠ EU noise policy Policy development Revisions of the Directive

Evaluation of the Directive

Research and projects

Noise









Evaluation of Environmental Noise Directive

Directive 2002/49/EC relating to the assessment and management of environmental noise (the Environmental Noise Directive) has been in place for more than 10 years. Recently, the Commission identified it as one of the Directives "to be evaluated with a focus on regulatory fitness" in the context of the Regulatory Fitness and Performance initiative (<u>REFIT</u>) and the <u>Better Regulation</u> programme of the European Commission.

This evaluation took place in 2015 and 2016 and addressed questions relating to effectiveness, efficiency, coherence, relevance and EU added value. The results are summarised in a Staff Working Document with and Executive Summary in English, French and German.

Summary of the evaluation

- The Directive remains highly relevant for EU policy-making as noise pollution still constitutes a major environmental health problem in Europe. A common approach to the noise management and harmonised data provide a high-quality evidence base for understanding the issue and further developing EU noise-atsource legislation.
- The Directive is coherent in itself and with other relevant EU legislation (environmental and noise-atsource legislation).
- Regarding effectiveness, some progress has been made towards a common approach throughout the EU, but effects materialised only partially due to the delays in adopting common assessment methodologies. Noise population exposure data was so far not used for legislation on noise at source. The Directive is however increasingly drawing attention to the significance of the harmful effects of noise on health.
- The administrative costs are low (€0.15 for noise maps and €0.03 for action plans per citizen, every 5 years). Cost-benefit analysis showed that where action plans - including measures for noise management - have been implemented, the Directive was efficient with a favourable cost-benefit ratio of 1:29.
- The Directive can generate EU added value by providing a level playing field across the EU in which transport infrastructure operators can compete, and by better informing EU policy-making. As a result of delays in implementation, the Directive has not yet delivered all its potential EU added value.



Annex II

Annex II

- establish noise mapping methods
- includes a road <u>vehicle</u> (acoustic) <u>classification</u>
- includes a road <u>surface</u> (acoustic) <u>classification</u>
- is mandatory for all roads of more than 3.000.000 vehicles/year



L 168/6

EN

Official Journal of the European Union

1.7.2015

The details of the different vehicle classes are given in Table [2.2.a].

Table [2.2.a]

Vehicle classes

Category	Name		Description	Vehicle category in EC Whole Vehicle Type Ap- proval (¹)		
1	Light motor vehicles		enger cars, delivery vans ≤ 3,5 tons, SUVs (²), 's (³) including trailers and caravans	M1 and N1		
2	Medium heavy vehi- cles	buse	ium heavy vehicles, delivery vans > 3,5 tons, is, motorhomes, etc. with two axles and twin mounting on rear axle	M2, M3 and N2, N3		
3	Heavy vehicles		yy duty vehicles, touring cars, buses, with e or more axles	M2 and N2 with trailer, M3 and N3		
4	Powered two-wheel-	4a	Two-, Three- and Four-wheel Mopeds	L1, L2, L6		
	ers	4b	Motorcycles with and without sidecars, Tri- cycles and Quadricycles	L3, L4, L5, L7		
5	Open category	To b	e defined according to future needs	N/A		

⁽¹) Directive 2007/46/EC of the European Parliament and of the Council of 5 September 2007 establishing a framework for the approval of motor vehicles and their trailers, and of systems, components and separate technical units intended for such vehicles (OJ L 263, 9.10.2007, p. 1).

⁽²⁾ Sport Utility Vehicles.

⁽³⁾ Multi-Purpose Vehicles.



Table F-4

Coefficients $a_{i,m}$ and β_m for road surface

Description	Min speed at which it is valid [km/h]	Maxi- mum speed at which it is valid [km/h]	Cat- egory	α _m (63 Hz)	α _m (125Hz)	α _m (250 Hz)	α _m (500 Hz)	α _m (1 kHz)	α _m (2 kHz)	α _m (4 kHz)	α _m (8 kHz)	ßm
Reference road surface		1	1	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
			2	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
			3	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
			4a	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
			4b	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
			5									

15 road surface types (can be modified nationally)

Description	Min speed at which it is valid [km/h]	Maxi- mum speed at which it is valid [km/h]	Cat- egory	α _m (63 Hz)	α _m (125Hz)	α _m (250 Hz)	α _m (500 Hz)	α _m (1 kHz)	α _m (2 kHz)	α _m (4 kHz)	α _m (8 kHz)	ßm
1-layer ZOAB	50	130	1	0,5	3,3	2,4	3,2	- 1,3	- 3,5	- 2,6	0,5	- 6,5
			2	0,9	1,4	1,8	- 0,4	- 5,2	- 4,6	- 3,0	- 1,4	0,2
			3	0,9	1,4	1,8	- 0,4	- 5,2	- 4,6	- 3,0	- 1,4	0,2
			4a	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
			4b	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
			5									
			1	0.4	2.4	0.2	_ 2 1	_ 12	_63	_18	-20	-30



Road (acoustic) classification

Annex II sets mandatory classification

 Road surface types not (mandatorily) standardised yet

Green Public Procurement

- EU Guidelines for road authorities
- Road surface is classified using ISO 11819-2

ISO 11819-2 and ISO/TS 11819-3

for road surface acoustic characterisation

CEN/TC 227/WG 5

 is developing and EN standard for classification of road pavements



European Union Noise Expert Group (NEG)

To allow detailed discussions with Member States and stakeholders on environmental noise policy issues, in particular in the context of the Environmental Noise Directive.

E.g.: providing guidance on noise action plans, producing recommendations for road surface, ...



Conclusion

- > 7th Environment Action Programme sets noise reduction targets;
- ➤ Directive 2002/49/EC sets
 - mandatory acoustic road surface classification;
 - mandatory action plans that could include optimised road surfaces;
- > optimised road surfaces would better work with optimised tyres/vehicles (so, GRB matter!).



So, is there space for exchange of info between GRB and EU-Noise Expert Group?



Thank you

Implementation

Combination of centralised and decentralised approaches

Majority of MS (21) have noise limit values, but lack of enforcement in many MS

Only 13 MS have designated quiet areas, in some cases to a limited degree

Implementation Findings



> Strategic noise mapping - issues

- ➤ Lack of human/financial resources
- Lack of input data
- > Lack of coordination
- Data comparability issues

Action plans - issues

- Period between mapping and action planning too short
- Lack of enforcement mechanisms for noisereducing measures
- Public consultation to be improved





> Relevance

- ➤ Objectives remain relevant
- non-stated, implicit objective: protection of citizens from excessive noise



Necessary to combine at-source and local measures

Coherence

- Coherent with noise-at-source legislation
- Some small issues for improvement



> EU added value

- level playing field
- > inform source legislation
- Not yet delivering the EU added value that it could provide



Effectiveness

- > Effects not fully materialised yet
- ➤ Introduction of CNOSSOS an important step
- ➤ Informing source legislation: not yet fully used
- > Overall long-term effects of reduction measures



> Efficiency



Administrative costs low

- Noise mapping €0.15
- Action planning €0.03
- o In total €18 million per year



Cost-benefit analysis

- o Overall Costs
- Benefits: reductionof impacts on humanhealth
- cost-benefit ratio of1:29 overall
- Ratios vary substantially between measures



Next steps



The Implementation report – action plan



Infringements – Annex III – Reporting mechanism

Conference



Noise in Europe 2017 Conference on the negative impacts of transport noise on human health

24 April 2017 in Brussels

With the participation of three Commissioners, MEPs, Member States, WHO, EEA, scientisists and stakeholders







Brussels, 13.12.2016 SWD(2016) 454 final

COMMISSION STAFF WORKING DOCUMENT

REFIT EVALUATION

of the

Directive 2002/49/EC

relating to the assessment and management of environmental noise



Brussels, 30.3.2017 COM(2017) 151 final

REPORT FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT AND THE COUNCIL

On the Implementation of the Environmental Noise Directive in accordance with Article 11 of Directive 2002/49/EC

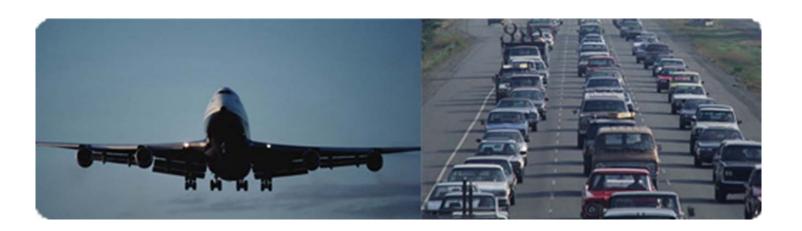
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"Among environmental factors in Europe, environmental noise leads to a disease burden that is second in magnitude only to that from air pollution" (WHO)



More than 100 million people in the EU are affected





What have we achieved

A common method:

Cnossos EU...

..to better inform legislation at source









Administrative costs 0,18 €/inhabitant













- Cohesion Fund
- EuropeanRegionalDevelopmentFund
- Research and Innovation
- Urban policy









Reporting mechanism

THE TOPS

Reporting limits

