

Commission Directive (EU) 2020/367 of 4 March 2020 amending Annex III to Directive 2002/49/EC of the European Parliament and of the Council as regards the establishment of assessment methods for harmful effects of environmental noise (Text with EEA relevance)

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amending Annex III to Directive 2002/49/EC of the European Parliament and of the Council as regards the establishment of assessment methods for harmful effects of environmental noise

(Text with EEA relevance)

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to Directive 2002/49/EC of the European Parliament and of the Council of 25 June 2002 relating to the assessment and management of environmental noise<sup>(1)</sup>, and in particular Article 12 thereof,

Whereas:

- (1) Annex III to Directive 2002/49/EC refers to dose-effect relations to be introduced by way of adaptations of that Annex to technical and scientific progress.
- (2) At the time of adoption of this Directive, the high quality and statistically significant information that could be used was that of the World Health Organisation (WHO) Environmental Noise Guidelines for the European Region<sup>(2)</sup>, presenting dose-effect relations for harmful effects induced by the exposure to environmental noise. Consequently, the dose-effect relations introduced in Annex III to Directive 2002/49/EC should be based on those guidelines. In particular concerning the statistical significance, the WHO studies were based on representative populations, and the results of these assessment methods are consequently considered relevant when applied to representative populations.
- (3) Beyond the dose-effect relations developed in the context of the WHO, other studies might show different health effect sizes and other health effects, in particular concerning effects of road, railway and aircraft noise in local situations in specific countries. The alternative dose-effect relations established therein could be used provided that they are based on high quality and statistically significant studies.
- (4) Currently, limited knowledge is available on the harmful effects of industrial noise so that it is not possible to propose a common method for their assessment. Also, country specificities were not assessed in studies and therefore could not be included in this Annex. Likewise, while links between environmental noise and the following harmful effects were found, there is currently no sufficient evidence for determining

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a common method for the assessment of those harmful effects: stroke, hypertension, diabetes and other metabolic health outcomes, cognitive impairment in children, mental health and wellbeing, hearing impairment, tinnitus, adverse birth outcomes. Finally, while the link between railway noise and aircraft noise to the ischaemic heart disease (IHD) is established, for these two sources the quantification of the increased risk of IHD is premature.

- (5) Directive 2002/49/EC should therefore be amended accordingly.
- (6) The measures provided for in this Directive are in accordance with the opinion of the Committee established under Article 13 of Directive 2002/49/EC,

HAS ADOPTED THIS DIRECTIVE:

*Article 1*

Annex III to Directive 2002/49/EC is replaced by the text in the Annex to this Directive.

*Article 2*

1 Member States shall bring into force the laws, regulations and administrative provisions necessary to comply with this Directive by 31 December 2021 at the latest. They shall forthwith communicate to the Commission the text of those provisions.

When Member States adopt those provisions, they shall contain a reference to this Directive or be accompanied by such a reference on the occasion of their official publication. Member States shall determine how such reference is to be made.

2 Member States shall communicate to the Commission the text of the main provisions of national law which they adopt in the field covered by this Directive.

*Article 3*

This Directive shall enter into force on the twentieth day following that of its publication in the *Official Journal of the European Union*.

*Article 4*

This Directive is addressed to the Member States.

Done at Brussels, 4 March 2020.

*For the Commission*

Virginijus SINKEVIČIUS

*Member of the Commission*

## ANNEX

## ANNEX III

## ASSESSMENT METHODS FOR HARMFUL EFFECTS

## (Referred to in Article 6(3))

## 1. Set of harmful effects

For the purposes of the assessment of harmful effects the following shall be considered:

- ischaemic heart disease (IHD) corresponding to codes BA40 to BA6Z of the international classification ICD-11 established by the World Health Organisation;
- high annoyance (HA);
- high sleep disturbance (HSD).

## 2. Calculation of harmful effects

The harmful effects shall be calculated by either of the following:

- the relative risk (RR) of a harmful effect defined as

$$RR = \left( \frac{\text{Probability of occurrence of the harmful effect in a population exposed to a specific level of environmental noise}}{\text{Probability of occurrence of the harmful effect in a population non exposed to environmental noise}} \right) \quad (\text{Formula 1})$$

- the absolute risk (AR) of a harmful effect defined as

$$AR = \left( \text{Occurrence of the harmful effect in a population exposed to a specific level of environmental noise} \right) \quad (\text{Formula 2})$$

## 2.1. IHD

For the calculation of the RR, with respect to the harmful effect of IHD and concerning the incidence rate (*i*), the following dose-effect relations shall be used:

$$RR_{IHD,i,road} = \begin{cases} e^{[(\ln(1.08)/10) \cdot (L_{den} - 53)]} & \text{for } L_{den} \text{ greater than } 53 \text{ dB} \\ 1 & \text{for } L_{den} \text{ equal or smaller than } 53 \text{ dB} \end{cases} \quad (\text{Formula 3})$$

for road noise.

## 2.2. HA

For the calculation of the AR, with respect to the harmful effect of HA the following dose-effect relations shall be used: