



STATUTORY INSTRUMENTS.

**S.I. No. 663 of 2021**

---

EUROPEAN COMMUNITIES (ENVIRONMENTAL NOISE)  
(AMENDMENT) REGULATIONS 2021

S.I. No. 663 of 2021

EUROPEAN COMMUNITIES (ENVIRONMENTAL NOISE)  
(AMENDMENT) REGULATIONS 2021

I, EAMON RYAN, Minister for the Environment, Climate and Communications, in exercise of the powers conferred on me by section 3 of the European Communities Act 1972 (No.27 of 1972) and for the purpose of giving further effect 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>, as amended by Commission Directive (EU) 2020/367 establishing assessment methods for harmful effects of environmental noise<sup>2</sup> and Commission Delegated Directive (EU) 2021/1226 establishing common noise assessment methods<sup>3</sup> and for the purposes of giving full effect to Directive 2002/49/EC as amended by EU Regulation 2019/1010<sup>4</sup> and the associated Commission Implementing Decision (EU) 2021/1967<sup>5</sup> establishing alignment of reporting obligations in the field of legislation related to the environment, hereby make the following regulations:

*Citation*

1. These Regulations may be cited as the European Communities (Environmental Noise) (Amendment) Regulations 2021.

*Commencement*

2. These Regulations shall come into operation on 31 December 2021.

*Interpretation*

3. In these Regulations –  
“Principal Regulations” means the European Communities (Environmental Noise) Regulation 2018 ( S.I. No. 549 of 2018 ).

*Amendment of Regulation 2 “Interpretation” of the Principal Regulations*

4. Regulation 2(1) is amended -
- (a) In the definition of “Annex” by substituting “Annex II to Commission Directive (EU) 2002/49/EC, as amended” for “Annex to Commission Directive (EU) 2015/996”, and
  - (b) By adding: “data repository” means an information system, managed by the European Environment Agency, containing

---

<sup>1</sup> OJ L 189, 18.7.2002, p. 12-25.

<sup>2</sup> OJ L 067, 5.3.2020, p. 132-136.

<sup>3</sup> OJ L 269, 28.7.2021, p. 65-142.

<sup>4</sup> OJ L 170, 25.6.2019, p. 115-127.

<sup>5</sup> OJ L 400, 12.11.2021, p.160-195

environmental noise information and data made available through national data reporting and exchange nodes under the control of the Member States.

*Amendment of Regulation 9 “Assessment Methods” of the Principal Regulations*

5. Regulation 9 (2) is replaced with the following: Noise-Mapping bodies shall calculate harmful effects in accordance with the Second Schedule. The Action Planning Authorities shall estimate the expected reduction in the harmful effects of noise exposure to the population as a result of the mitigation measures contained in their Noise Action Plans.

*Amendment of Regulation 12 “Action Plans” of the Principal Regulations*

6. Regulations 12(1) and 12(3)(a) are amended by the substitution of “2024” for “2023” in each place that it occurs.

*Amendment of Regulation 13 “Access to Information” of the Principal Regulations*

7. Regulation 13 is replaced with the following: Noise-mapping bodies and action planning authorities shall, in accordance with relevant Union legislative acts, in particular, Directives 2003/4/EC and 2007/2/EC of the European Parliament and of the Council, and in conformity with the Third and Fourth Schedule to the Principal Directive, the provisions of the European Communities (Access to Information on the Environment) Regulations 2007 (S.I. No. 133 of 2007), as amended, make strategic noise maps and revised strategic noise maps and, action plans and revised action plans available to the public and disseminate them by any appropriate means, including through the use of available information technologies.

*Amendment of Regulation 14 “Reporting” of the Principal Regulations*

8. Regulation 14 (1) is replaced with the following: The Agency shall furnish the Commission with information from strategic noise maps and summaries of action plans as referred to in the Fifth Schedule and in the Annex to Commission Implementing Decision (EU) 2021/1967, within six months of the dates set out in Regulation 11 and 12. For that purpose, the Agency shall only report the information by electronic means to a mandatory data repository. In the event that the Agency wants to update information, it shall describe the differences between the updated and original information and the reasons for the update when making the updated information available to the data repository.

*Amendment of Second Schedule “Assessment Methods for Harmful Effects” to the Principal Regulations*

9. The Second Schedule to the Principal Regulations is replaced with the following:

**ASSESSMENT METHODS FOR HARMFUL EFFECTS**

**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. Ischaemic Heart Disease (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:

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

for road noise.

## 2.2. High Annoyance (HA)

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

$$AR_{HA,road} = \frac{(78.9270 - 3.1162 * L_{den} + 0.0342 * L_{den}^2)}{100} \quad (\text{Formula 4})$$

for road noise;

$$AR_{HA,rail} = \frac{(38.1596 - 2.05538 * L_{den} + 0.0285 * L_{den}^2)}{100} \quad (\text{Formula 5})$$

for railway noise;

$$AR_{HA,air} = \frac{(-50.9693 + 1.0168 * L_{den} + 0.0072 * L_{den}^2)}{100} \quad (\text{Formula 6})$$

for aircraft noise.

## 2.3. High Sleep Disturbance (HSD)

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

$$AR_{HSD,road} = \frac{(19.4312 - 0.9336 * L_{night} + 0.0126 * L_{night}^2)}{100} \quad (\text{Formula 7})$$

for road noise;

$$AR_{HSD,rail} = \frac{(67.5406 - 3.1852 * L_{night} + 0.0391 * L_{night}^2)}{100} \quad (\text{Formula 8})$$

for railway noise;

$$AR_{HSD,air} = \frac{(16.7885 - 0.9293 * L_{night} + 0.0198 * L_{night}^2)}{100} \quad (\text{Formula 9})$$

for aircraft noise.

## 3. Assessment of harmful effects

3.1. The exposure of the population shall be assessed independently for each noise source and harmful effect. Where the same people are simultaneously exposed to different noise sources, the harmful effects may -in general- not be cumulated. However, those effects may be compared to assess the relative importance of each noise.