



## Introduction: Policy context and evaluation of the Environmental Noise Directive

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### ABSTRACT

In its Environment Action Programme to 2020, the EU has envisaged to significantly decrease noise pollution within its borders, moving closer to levels recommended by the World Health Organisation, by 2020. One of the main legislative tools in achieving this aim is the Environmental Noise Directive (2002/49/EC) (END), aiming at a common approach towards environmental noise in the EU and setting the basis for further EU action. The European Commission is currently undertaking an evaluation of the END, assessing its relevance, coherence, effectiveness and efficiency as well as its EU added value. This includes benefits, costs and hurdles to the implementation of an effective EU noise policy. This paper gives an overview of the preliminary findings of this evaluation as a starting point for a discussion on the future development of a European noise policy.

Keywords: Environmental noise, Noise Policy, European Directives

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### 1. INTRODUCTION

Recent evidence shows that noise pollution continues to constitute a major environmental health problem in Europe. The findings of the European Environment Agency's report 'Noise in Europe 2014' confirmed the status of noise as the second most dangerous environmental hazard to people's health, immediately after air pollution. The report, which coupled exposure data collected through Member States' strategic noise maps with epidemiological evidence indicating the effects of noise pollution, demonstrated the negative effects of noise pollution on the health and well-being of European citizens. Among other things, the report found that road traffic is the most dominant source of environmental noise, with an estimated 125 million people affected by noise levels greater than 55 decibels (dB) Lden, resulting in almost 20 million annoyed and 8 million sleep-disturbed adults in Europe every year.

The health effects caused by exposure to excessive noise also impact the European economies. They put a burden on health care systems which have limited resources, while at the same time generating the loss of productivity of workers whose sleep is disturbed or health affected. The burden of disease from environmental noise in Europe based on partial data was estimated by WHO-JRC and accounts for at least 1.6 million healthy life years lost every year in urban areas in Western Europe. In addition, it is estimated that environmental noise causes 30 to 50 thousand cases of premature death in Europe each year. The societal cost of noise pollution has been estimated to 40 billion euro per year in the EU (0.4% of the EU GDP).

In its Environment Action Programme to 2020, 'Living well, within the limits of our planet' (7th EAP), the EU has committed itself to significantly decrease noise pollution within its borders, moving closer to levels recommended by the World Health Organisation (WHO), by 2020. One of the main legislative tools in achieving this aim is the Environmental Noise Directive (2002/49/EC) (END), an overarching directive aimed at achieving a common approach towards environmental noise in the EU. The Directive, which was adopted more than 10 years ago, is currently undergoing a retrospective

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evaluation under the European Commission's Regulatory Fitness and Performance programme (REFIT). This paper aims to give an overview of the preliminary findings of the evaluation of the END as well as set the scene for a discussion on the potential developments in the years to come.

## 2. ENVIRONMENTAL NOISE DIRECTIVE

### 2.1 Objectives and scope

The Environmental Noise Directive is the primary legislative tool for the assessment and management of environmental noise in the EU. The evaluation of the Directive is conducted against its objectives and taking into account its scope, which makes it important to recall these.

The Directive has two objectives, which are equally important:

- to define a common approach intended to avoid, prevent or reduce on a prioritised basis the harmful effects, including annoyance, due to exposure to environmental noise;
- to provide a basis for developing Community measures to reduce noise emitted by the major sources, in particular road and rail vehicles and infrastructure, aircraft, outdoor and industrial equipment and mobile machinery.

The scope of the Directive includes environmental noise to which humans are exposed, but excludes noise caused by the exposed person himself, noise from domestic activities, noise created by neighbours, noise at work places or noise inside means of transport or due to military activities in military areas. In practice, the obligations which the Directive imposes on the Member States and the European Commission address noise from road, rail and air traffic and industrial installations in agglomerations.

The Directive does not set any limit, target or trigger values, nor does it prescribe noise-reduction measures.

### 2.2 Member State obligations

In order to achieve its objectives, the Directive requires the EU Member States to conduct a process of noise mapping and preparing action plans for noise management. Strategic noise maps and the corresponding action plans must be developed and adopted in 5-yearly cycles for the following entities:

- agglomerations with a population of more than 100 000 persons;
- roads with more than three million vehicle passages per year;
- railways with more than 30 000 train passages per year;
- civil airports with more than 50 000 movements per year.

Member States must also ensure that the public is informed about environmental noise and its effects, and consulted about proposals for action plans.

Finally, Member States must send to the Commission the information from the noise maps and action plan summaries.

### 2.3 European Commission obligations

The Directive also imposes certain obligations on the European Commission. Most notably, the Commission is required to submit to the European Parliament and Council a report on the implementation of the Directive. The report shall include an assessment of the need for further Community actions on environmental noise, a review of the acoustic environment in the Community, and, if appropriate, proposals for the amendment of the Directive. The report shall be reviewed every five years.

### 2.4 State of implementation

The Directive has been transposed in all 28 EU Member States and any transposition and legislation issues have been largely resolved. In 15 Member States, the END was the first piece of national legislation addressing environmental noise.

With regard to the administrative approach to END implementations, there are different clusters of Member States, ranging from those who have adopted a centralised approach to those who have a fully decentralised approach, and including combined approaches as well.

When it comes to the progress made in noise mapping and action planning, significant delays have been encountered in both rounds (2007/2008 and 2012/2013). For example, for the second round of noise mapping, which was due to be completed in 2012, more than 30% of the maps were still missing

at the time of analysis at the end of 2014. The delays in the adoption of action plans are estimated to be even larger.

### **3. EVALUATION OBJECTIVES AND METHODOLOGY**

#### **3.1 Regulatory Fitness and Performance programme (REFIT)**

The evaluation of the Environmental Noise Directive fits into the context of the Commission assessing the impacts of policies and legislation at every stage of the policy process, with the aim of creating a simple, clear, stable and predictable regulatory framework. This is implemented through the Regulatory Fitness and Performance programme (REFIT), which was created to ensure that EU legislation achieves its policy objectives at the lowest possible cost and with a minimum of administrative burden. Among other things, this means that, once implemented for a sufficient period of time, initiatives are evaluated to check their performance against standard criteria. As a consequence, the Environmental Noise Directive was identified to be evaluated with a focus on regulatory fitness in the European Commission Communication on Regulatory Fitness and Performance (REFIT) in 2013. As the evaluation is part of the REFIT programme, it follows the guidelines of this programme and assesses a number of standard criteria described in the following section. Evaluations under REFIT are carried out externally.

#### **3.2 Objectives of the evaluation**

In accordance with the principles of the REFIT programme, the evaluation aims to assess the Environmental Noise Directive with respect to the five main criteria outlined below:

- Relevance, which assesses whether the objectives of the Directive still remain relevant and match current needs;
- Coherence, which assesses whether the Directive is coherent with other EU legislation on noise and how it contributes to achieving the objectives of other EU legislation;
- Effectiveness, which looks into the progress made over time towards achieving the objectives of the Directive, the impact of the Directive and any unintended consequences of the Directive;
- Efficiency, which looks into the costs associated with compliance with the Directive in different Member States, and their relation to the benefits resulting from the Directive's implementation.
- EU Added Value, which discusses what has been the EU added value of the END compared to what could have been achieved by Member States at national and/or regional levels.

In preparation for the evaluation, each of these questions was further elaborated and divided into subquestions, all of which are addressed by the evaluation.

#### **3.3 Evaluation methodology**

The methods used to find answers to the five main evaluation questions and their subquestions focused on three main approaches: desk research, stakeholder consultation and a cost-benefit analysis.

As part of the desk research, the consortium conducting the evaluation investigated legislative texts in the EU and Member States, EU and national guidelines for the implementation of the various aspects of the Directive, the first report on the implementation of the Directive, and the Member States' submissions of data to the Environmental Noise Directive Reporting Mechanism (ENDRM).

The stakeholder consultation was comprehensive and conducted through a number of different methods. It included in-depth interviews with 104 Member State competent authorities and stakeholders, three online surveys for different types of stakeholders with 73 responses, a stakeholder workshop with 53 participants, and an online public consultation with more than 1000 respondents.

A detailed cost-benefit analysis was performed to support the evaluation of the efficiency of the Directive. Data was collected and analysed on 19 test cases, after which an extrapolation was made to the EU level.

### **4. PRELIMINARY EVALUATION FINDINGS**

The preliminary evaluation results presented below are based on the work done by the consultants working for the European Commission, namely the Centre for Strategy & Evaluation Services (CSES) and ACCON supported by AECOM. At the time of writing, the analyses do not yet include information

from all the sources used for the evaluation and the findings can therefore not be considered final. The final evaluation findings will be set out in a European Commission Staff Working Document, which is expected to be published by the end of 2016.

#### **4.1 Preliminary findings on relevance**

The evaluators found that the two objectives of the Directive remain relevant.

The first objective (Article 1.1) remains relevant as there is a perceived need among most END stakeholders for a "common approach" to the assessment of environmental noise, and a general acceptance that strategic noise mapping is a suitable mechanism to provide evidence of population exposure at both Member State and EU level.

The second objective (Article 1.2), that the END should provide a basis for developing Community measures to reduce noise emitted by major sources, was viewed by most stakeholders as being highly relevant to identified needs. It was acknowledged that whilst environmental noise at receptor is a local problem that should predominantly be tackled through local measures, such measures could be ineffective without additional controls over noise emitted by the major sources of noise, particularly given the growth in the number of such sources.

In addition, the evaluators revealed that there was an implicit longer-term objective to the Directive which was not explicitly stated in its text: to protect citizens from the health effects of excessive noise. In this sense the two objectives specified in Articles 1.1 and 1.2 can be viewed as intermediate steps along the way to a longer term aim. This implicit, longer-term objective of the Directive, to protect public health, was found to remain relevant as well.

#### **4.2 Preliminary findings on coherence**

With regard to coherence with other EU legislation on noise, the feedback from stakeholders did not generally find evidence of a lack of coherence between the END and noise at source legislation. Stakeholders were clear that whilst source legislation is top-down and plays an important role in tackling the problem, it is equally important to address noise at receptor through local measures. The majority of stakeholders agreed that the relationship between the END and other EU legislation on noise is a symbiotic and mutually supporting one, especially with regards to noise at source legislation.

With regard to the internal coherence and clarity of the text of the Directive, several minor elements were identified where clarification would be needed, such as the definitions of agglomeration, quiet areas in agglomeration and quiet areas in open country.

#### **4.3 Preliminary findings on effectiveness**

When assessing effectiveness, the evaluators found that the two objectives of the END were mutually supporting and reinforcing. Although many environmental noise issues arise at local level and are specific to each Member State, progress towards a "common approach" to the measurement of environmental noise through strategic noise mapping is a crucial step towards harmonising the data and enabling national-level data and information on population exposure by transport source to be collected at EU level. This is an important precursor if END data is to subsequently be used by EU policy makers to inform the revision of existing EU noise at source legislation, the second objective of the END.

With regard to the first objective, evaluators found that considerable progress had been made towards the development of a common approach to noise assessment methods in Europe through the CNOSSOS-EU process, which was completed with the revision of Annex II of the Directive in 2015. This will in principle lead to harmonised data.

With regard to the second objective, it was difficult to make a precise assessment of the influence the Directive has had on noise at source legislation, but overall the evaluators felt that the second objective was also reasonably effective.

#### **4.4 Preliminary findings on efficiency**

With regard to efficiency, the evaluators found that the administrative costs of END implementation were not overly burdensome and that they were proportionate to the scale of the challenge of tackling the problem of high levels of environmental noise through an EU-wide common approach. Moreover, there was evidence of a general reduction in administrative costs between reporting rounds in relation to non-staffing costs. It is also important to note that the costs varied widely between Member States.

On the basis of the findings from the cost-benefit analysis, the evaluators concluded that the

implementation of the END has been efficient overall. A favourable cost-benefit ratio was identified overall and for each of major roads, major railways and major airports, although there are wide variations in the types and level of costs and benefits, even for the same type of measure, across different countries.

#### 4.5 Preliminary findings on EU added value

Overall, 93% of respondents to the online survey of public authorities agreed with the statement that the Directive has added value to what Member States were already doing. The added value was reflected in the fostering of a "common approach" through the development of common assessment methods. Moreover, the Directive contributed to raising public awareness and putting environmental noise on the policy agenda, which would not have occurred in its absence. Finally, the Directive contributed to introducing a degree of accountability and benchmarking as to what national authorities are doing to mitigate noise.

### 5. CONCLUSIONS

As shown in this paper, the ongoing evaluation of the Environmental Noise Directive is based on a solid and comprehensive methodology, with a special focus on collecting and analyzing the views of those directly affected by the Directive's implementation and noise pollution in general.

The preliminary findings indicate that the objectives of the Directive remain relevant 14 years after its adoption, and that it is coherent with other EU legislation on noise. The evaluators have found that the two objectives of the END are mutually supporting and reinforcing, and have been implemented in a reasonably effective and efficient manner. Finally, the Directive has been found to have played an important role in raising public awareness and putting environmental noise on the policy agenda.

The evaluation process is expected to be completed by the end of 2016. Following the conclusion of the evaluation process, the Commission may consider different options for the future development of the Directive and European noise policy.

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