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**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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1. INTRODUCTION

On 25 June 2002, Directive 2002/49/EC of the European Parliament and the Council relating to the assessment and management of environment noise (hereinafter Environmental Noise Directive, END) was adopted. This was a step forward in developing the EU noise policy.

The purpose of the Directive is to “*define a common approach intended to avoid, prevent or reduce on a prioritised basis the harmful effects, including annoyance, due to the exposure to environmental noise*”.

To achieve this, the Directive requires the Member States to carry out a number of actions, in particular:

- (1) To determine the exposure to environmental noise through noise mapping,
- (2) To adopt action plans based upon the noise mapping results and
- (3) To ensure that the information on environmental noise is made available to the public.

The Directive also provides a basis for developing further EU measures to reduce noise emitted by different sources. This implementation report is prepared in accordance with Article 11 of the END which required the Commission to assess in particular¹:

- the need for further EU actions on environmental noise (article 11.2) and
- a review of the acoustic environment quality in the EU based on the data reported by the Member States (article 11.3).

In preparation of this report, the Commission has received input from the EEA² and carried out a number of supporting studies³ where additional information can be found.

2. ENVIRONMENTAL NOISE AND ITS IMPACTS

Environmental noise is a significant environmental problem across the EU. Increasingly more information is becoming available about the health impacts of noise. For example, the latest

¹ The report was delayed for several reasons, in particular because of the implementation delays, the lack of sufficient data and the complexity of the assessment process

² <http://www.eea.europa.eu/themes/noise>

³ <http://www.milieu.be/noise/index.html>

publication⁴ of the World Health Organization (WHO) and the Joint Research Centre of the Commission shows that traffic-related noise may account for over 1 million healthy years of life lost annually in the EU Member States and other Western European countries.

In addition, the Guidelines for EU Noise⁵ of the WHO acknowledged effects of environmental noise, including annoyance, as a serious health problem. The WHO Night Noise Guidelines for Europe⁶, propose a guide value for night-time levels as low as 40 decibel (dB, L_{night}). Furthermore, the EU has funded between 2009 and 2011 a large coordination action encompassing 33 participating institutes from Europe⁷. Recent studies⁸ indicate that environmental noise is an important environmental risks threatening public health and that noise exposure in Europe presents an increasing trend compared to other stressors. Urbanization, growing demand for motorized transport and inefficient urban planning are the main driving forces for environmental noise exposure. Furthermore, noise pollution is often linked to urban areas where also air quality can be a problem.

Noise pollution can annoy, disturb sleep, affect the cognitive function in schoolchildren, cause physiological stress reactions and can cause cardiovascular problems in chronically noise-exposed subjects⁹. Stress can trigger the production of certain hormones which may lead to a variety of intermediate effects, including increased blood pressure. Over a prolonged period of exposure these effects may in their turn increase the risk of cardiovascular disease and psychiatric disorders. WHO proposed several threshold levels^{5, 6} ranging from 32 (L_{Amax} ¹⁰, inside) to 42 ($L_{\text{night, outside}}$) dB addressing these negative health effects.

Economic costs of noise pollution include devaluation in house prices, productivity losses from health related impacts and distributional impacts. Social costs are related to premature death or morbidity (poor concentration, fatigue, hearing problems). The social costs of traffic, rail and road noise across the EU was recently estimated amount to €40 billion a year, of which 90% is related to passenger cars and goods vehicles. This was about 0.4% of total EU GDP¹¹ including health care costs. According to the 2011 Commission's White Paper on Transport, the noise-related external costs of transport would increase to roughly 20 billion € by 2050 unless further action was taken.

3. LEGAL TRANSPOSITION

The END had to be transposed by 18 July 2004. The Commission registered cases of non communication for 14 EU¹² Member States. All other Member States transposed the END

⁴ WHO-JRC, 2011; Report on “Burden of disease from environmental noise, <http://www.euro.who.int/en/what-we-do/health-topics/environmental-health/noise>

⁵ WHO, 1999; <http://whqlibdoc.who.int/hq/1999/a68672.pdf>

⁶ WHO, 2009 <http://www.euro.who.int/en/what-we-do/health-topics/environmental-health/noise/publications>

⁷ ENNAH, www.ennah.eu

⁸ The Environmental Burden of Disease in Europe project ranked noise as second environmental stressor It introduced the general methodology targeting for use of the Disability-adjusted life years, DALY, as the most commonly used measure; <http://en.opasnet.org/w/Ebode>

⁹ Babisch 2006, 2008; Miedema & Vos 2007; WHO Europe 2009, 2010

¹⁰ L_{Amax} – maximum sound pressure level

¹¹ EC Delft, 2007, http://www.transportenvironment.org/docs/Publications/2008/2008-02_traffic_noise_ce_delft_report.pdf

¹² AT, BE, CZ, DE, EL, FI, FR, IE, IT, LU, PT, SE, SL, UK

into their national legislation by the deadline. By October 2007, all cases of non-communication were closed.

The overall quality of legal transposition was satisfactory. The Commission identified, that so far two Member States¹³ had shortcomings as regards the transposition of articles 4, 5, 6, 7 and 8. However, a validation of the assessment of non-conformity is still outstanding. Should these initial findings be confirmed, the Commission will follow-up appropriately.

4. IMPLEMENTATION OF THE DIRECTIVE

Member States have a number of obligations under the END and must also report certain information to the European Commission. The deadlines for each of the requirements add up to an ambitious periodic implementation and reporting cycle (see table 1 below).

Implementation deadline	Issue	Reference	Updates
30 June 2005	Information on major roads, major railways, major airports and agglomerations according to the upper thresholds, designated by MS and concerned by 1 st round of mapping	Art. 7-1	Mandatory every 5 years
18 July 2005	Establishment of competent bodies for strategic noise maps, action plans and data collection	Art. 4-2	Possible at any time
18 July 2005	Noise limit values in force or planned and associated information	Art. 5-4	Possible at any time
30 June 2007	Strategic noise maps for major roads, railways, airports and agglomerations according to the upper thresholds,	Art. 7-1	
18 July 2008	Action plans for major roads, railways, airports and agglomerations	Art. 8-1	Mandatory every 5 years
31 December 2008	Information on major roads, major railways, major airports and agglomerations according to the lower thresholds, designated by MS and concerned by 2 nd round of mapping	Art. 7-2	Possible at any time
30 June 2012	Strategic noise maps for major roads, railways, airports and agglomerations according to the lower thresholds,	Art. 7-2	Mandatory every 5 years

4.1. Designation of administrative bodies

Most Member States reported to the Commission on time and all Member States have allocated competences for implementation of the END to relevant administrative bodies. The cross-cutting scope of the END has led to the participation of several different government

¹³ LV, PL

agencies as well as private actors for infrastructure management in some Member States. Several Member States reported problems associated with the coordination of the involved bodies, both in the early stages of data collection and in the later stages of action and implementation planning.

4.2. Noise indicators and limit values

Article 5 of the END introduced noise indicators for reporting but does not set any legally binding EU-wide noise limit values or targets. Member States were required to report their national limit values in force or under preparation.

Member States have taken a range of approaches. Most¹⁴ have set legally binding noise limit values or are currently revising them¹⁵. Others¹⁶ have guideline values in place.

The noise maps revealed that noise limit values were often transgressed without sufficient measures having been implemented. There was some evidence that the implementation of measures to control noise or to insulate exposed populations, in some countries, was not linked to whether a value is binding or not.

Another issue was the wide range of limit, trigger and guideline values. Only a limited number of Member States¹⁷ specifically indicated that they had used health-based assessments or drew on WHO health-based assessments in establishing noise limit values. Due to often different bases, concepts and levels of differentiation, it was difficult to summarise and compare the different levels in the Member States¹⁸.

4.3. Noise assessment

In general, the efforts of Member States on reporting enabled the Commission and the EEA to produce an information base that did not previously exist at EU level. However, the quality of the reports and the timing of the deliveries varied considerably and hampered the compliance assessment process.

The END did not specify the details for reporting the different data-flows. Only the minimum technical requirements were defined (cf. annex VI of the END).

As a consequence, the Commission and the EEA developed the END Reporting Mechanism (ENDRM)¹⁹ which facilitated and streamlined data collection, quality control and compliance assessment. In 2007, the Noise Committee agreed to use ENDRM on a voluntary basis. The additional linkage to the EEA's 'Reportnet'²⁰, further enhanced the effectiveness of the ENDRM.

¹⁴ AT, BG, BE, CZ, DK, EE, ES, FR, DE, EL, IT, LV, LT, LU NL, PL, PT, SL, SI

¹⁵ LT, LV, RO

¹⁶ FI, IE, SE, UK

¹⁷ EE, LU, PT, SL and Brussels Administration of BE

¹⁸ EEA Technical report No 11/2010 and study report (cf. footnote 2) for more details.

¹⁹ http://eea.eionet.europa.eu/Public/irc/eionet-circle/eione_noise/library

²⁰ <http://www.eionet.europa.eu/reportnet>

4.3.1. Major agglomerations, roads, rail and airports

By 2005, Member States were required to inform the Commission of the major roads, major railways, major airports, and agglomerations according to the upper thresholds²¹, within their territories. A first update was due by 30 June 2008 relating to lower thresholds²². From 2010 onwards every five years, Member States were required to update the list for both thresholds.

The experience gained in the reporting process led progressively to a more timely, comparable and manageable reporting. Whereas the last Member State report for 2005 was almost two years late, in 2010 the delay was reduced to five months. In 2010, 18 Member States reported on time, eight were late. Only Italy has not reported yet.

4.3.2. Strategic noise maps

Member States were required to prepare no later than 30 June 2007 strategic noise maps (article 7 (1)). These requirements apply again on 30 June 2012 and for each subsequent five-year period. Such noise maps should be made for all major roads, railways, airports and agglomerations pursuant to article 7 (1) identified in the preceding calendar year (cf. 4.3.1)²³.

Strategic noise maps are to be used by the competent authorities to identify priorities for action planning and by the Commission to assess the number of people exposed to noise.

Twelve Member States²⁴ provided all the mandatory data for all sources, eleven²⁵ provided data for all sources with some minor shortcomings and three²⁶ provided data for some of the sources. Only Malta did not send a report to the Commission (to date) and the Commission launched an infringement procedure in this case.

The assessment relating to the first round of noise mapping suggests that around 40 million people across the EU are exposed to noise above 50 dB from roads within agglomerations during the night (see table 2). More than 25 million people are exposed to noise at the same level from major roads outside agglomerations. These numbers are expected to be revised upwards as more noise maps are received and/or assessed.

²¹ Upper thresholds: Major roads > 6 m. vehicle/y; major railways > 60 000 train/y; major airports > 50 000 movements/y; major agglomerations > 250 000 inhabitants.

²² Lower thresholds: major roads > 3 m. vehicle/y; major railways > 30 000 train/y; and major agglomerations > 100 000 inhabitants.

²³ Note, Article 7 provides that the list of major agglomerations, roads, rails and airports reported in 2005 needs to be reviewed when preparing the first strategic noise map, i.e. taking into account the latest situation in 2006. Similarly, the subsequent stages of noise mapping need to update the lists already reported to the Commission to avoid missing out any major hot spots which have passed the threshold in the meantime.

²⁴ BG, CZ, EE, HU, IE, LT, LV, LU, PL, PT, SI, UK

²⁵ AT, BE, CY, DK, FI, DE, NL, RO, ES, SE, SK

²⁶ FR, EL, IT

Table 2: Summary of total number of people exposed to environmental noise based on data submitted by the Member States related to the first round of noise mapping

Scope	Number of people exposed to noise above $L_{den}^{27} > 55$ dB [million]	Number of people exposed to noise above $L_{night} > 50$ dB [million]
Within agglomerations (163 agglomerations in EU > 250 000 inhabitants)		
All roads	55,8	40,1
All railways	6,3	4,5
All airports	3,3	1,8
Industrial sites	0,8	0,5
Major infrastructures, outside agglomerations		
Major roads	34	25,4
Major railways	5,4	4,5
Major airports	1	0,3

The Commission also looked at the administrative burden and costs required to produce noise maps. The most demanding tasks were obtaining data on the noise sources, topography, surrounding buildings and population. The costs for noise mapping vary between 0.33-1.16 EUR/inhabitant, with an average of 0.84 EUR/inhabitant.²⁸

4.3.3. Harmonised assessment methods for mapping

According to article 6 of the END, the Commission was mandated to establish common noise assessment methods for the determination of the noise indicators. However, no deadline or timetable was provided by the Directive. Until the harmonised methods are available, the Directive established interim methods to be used, but Member States also had the possibility to use their own methods

The Commission undertook an assessment of the degree of comparability of the results generated by the different methods. The assessment concluded that the national assessment methods differ from the interim methods for 13 Member States. As a result, the Commission started the development of harmonized assessment methods (CNOSSOS-EU) (cf. 0) in 2008.

²⁷ L_{den} – day-evening-night noise indicator

²⁸ European Commission – Cost study on noise mapping and action planning; P-44581-W, 2000

4.3.4. Action plans

According to Article 8, Member States shall ensure that the competent authorities have drawn up action plans designed to manage noise pollution and effects, including noise reduction if necessary. The measures within the plans were at the discretion of the competent authorities as long as they fulfil the minimum requirements of Annex V.

So far, 20 Member States have submitted summaries related to the action plans. Five Member States²⁹ provided the data required by the END in time³⁰. Eight³¹ submitted with 6 months delay and seven³² sent it more than one year after the deadline. The following seven Member States have so far not provided action plans to date: DK, FR, EL, HU, IT, MT and SI.

The information provided by the Member States was very diverse and the data were scattered. Consequently, a comprehensive analysis of the action plans proved challenging and is still ongoing.

4.3.5. Quiet Areas

Quiet areas make a beneficial contribution to public health, particularly for people living in noisy city areas. As part of the action plans, Member States were required to introduce specific measures and draw up action plans to protect quiet areas in agglomerations against an increase in noise. However, the END left it largely to the discretion of the Member States to delimit these areas.

The consequence of this discretion led to very divergent approaches across the EU. While the majority of Member States designated quiet areas in agglomerations, many have not yet done so in open country.

4.4. Public information, consultation and data management

According to article 8 and 9, Member States shall ensure that the public was consulted about the action plans and that the plans were made publically available and disseminated in accordance with Directive on public access to environmental information³³. Pursuant to Article 10, paragraph 3 of the Directive, the Commission shall set up a database of information on strategic noise maps in order to facilitate the compilation of the report referred to in Article 11 and other technical work.

To this end the Commission made all reports submitted by the Member States until December 2010 publically available.³⁴ Also the use of EEA's 'Reportnet' facilitated information management and reduced the time needed for assessment of the reports. Albeit voluntary at present, around 80 % of the Member State reports were posted on 'Reportnet'. Furthermore, the EEA launched the Noise Observation and Information Service for Europe (N.O.I.S.E)³⁵ in October 2009 for the purpose of informing the public about the noise pollution in Europe.

²⁹ DE, IE, LT, SE, UK

³⁰ 18/01/2009.

³¹ CY, CZ, EE, ES, FI, LU, PL, SL

³² AT, BE, BG, LV, NL, PT, RO

³³ 2003/4/EC (OJ L41, 14.2.2003, p 26-32)

³⁴ http://circa.europa.eu/Public/irc/env/d_2002_49/library

³⁵ <http://noise.eionet.europa.eu/>

5. POSSIBLE ACTION IN THE SHORT AND MEDIUM TERM

The END enabled a step forward in addressing noise pollution at EU level. This report identifies a number of achievements and remaining challenges in the implementation of this Directive.

The achievements have not only been recognised by the Commission analysis. Eurocities³⁶ concluded in an evaluation that the Directive "*has brought real benefits*".

To start with, the Directive introduced a management system of environmental noise in all Member States. Some Member States had already developed such systems and gained experience, while others addressed these issues in a systematic manner for the first time. While traditionally, the competences on noise management fell under several authorities and levels of administration in the Member States, some Member States used the implementation of the END to set up appropriate co-operation and co-ordination structures.

Other achievements were, in particular:

- Progress in mapping and assessing noise pollution in the EU leading, for the first time, to an overview on the extent of noise pollution problems;
- Steps towards further improving comparability of strategic noise mapping including common indicators and the establishment of a comprehensive set of noise data at EU level, which did not exist before;
- EU-wide drafting of noise action plans addressing the noise "hot spots" identified by the Member States;
- Identifying gaps with regard to EU legislation on sources of noise (e.g. vehicles, railways, aircrafts), (cf. 5.2).

At the same time, several implementation problems and other shortcomings have been identified during the last years which need to be addressed in the future. These challenges have been grouped into two main areas of possible follow up action, namely improvements of implementation and further development of legislation regulating noise sources.

5.1. Improving implementation

The analysis of the first stage of implementation of the END has revealed potential areas for improvement that could be taken by the Commission and the Member States directly and immediately. To this end, the Commission intends to present a work programme to the Noise Committee referred to by Article 13 of the Directive including some of the elements identified below. Where necessary, the Commission will also consider taking legal action to complement the proactive implementation activities listed below.

³⁶ Eurocities WG Noise (2009): <http://workinggroupnoise.web-log.nl/>

5.1.1. Finalising the harmonised framework for mapping methods

Despite the improvements of comparability of strategic noise mapping, the situation is far from ideal. The ongoing assessments have shown that it remains difficult to present comparable figures on the number of people being exposed to excessive noise levels. Difficulties relate, *inter alia*, to differing ways in data collection, quality and availability and assessment methods used. This leads to a variability of results across EU Member States. The harmonisation framework of the method(s), which sufficiently reflects sectoral specificities, will ultimately lead to the required level of comparability.

In 2008, Commission efforts have started on developing harmonized methods for assessing noise exposure (according to article 6.2). A project entitled "CNOSSOS-EU" (Common Noise Assessment Methods in Europe) led by the Joint Research Centre will provide the technical basis for preparing a Commission Implementing Decision. Provided the technical work can be completed in 2011, the Commission is considering a possible revision of Annex II of the END in early 2012 (following Committee opinion in 2011). The harmonised methodological framework could focus on the strategic mapping and would have to carefully balance the needs for harmonisation by proportionality and sectoral specificities, e.g. as regards data requirements. As part of this decision, the Commission intends to propose a joint Commission/EEA/Member States work programme for the implementation of CNOSSOS-EU during 2012-2015 with the view to making it operational for the third reporting cycle in 2017.

5.1.2. Developing EU implementation guidance

Many aspects of the Directive were not prescribed in detail or leave certain room for different interpretation and implementation. Many Member States suggested that these issues could be addressed through dedicated action assisting in the implementation and compliance at EU level, such as the development of guidance documents, the information exchange of best practices or the organisation for specific workshops and training courses. The following issues for such action were identified: mapping methods and best mapping practices, predictive values for noise maps, dose-response relationships, calculating multiple exposure, producing action plans and trigger or target values.

Concerning action plans, many Member States felt that the minimum requirements set out in Annex V are not sufficient to help prepare these plans. This includes, in particular the aspect of designating quiet areas (cf. 4.3.5).

The implementation activities which are envisaged to form part of the work programme should also help improving the co-operation and co-ordination mechanisms within the Member States.

5.1.3. Improving synergies between air quality and noise management

The potential for closer co-ordination and integration of air quality and noise management has been suggested frequently. The implementation of the Ambient Air Quality Directive (2008/50/EC) and its predecessors requires similar elements, e.g. the data collection in agglomerations, improvement of assessment methods, preparation of action plans, information of the public and reporting to the Commission. Some Member States have reported positive experiences from integrating air quality and noise implementation, e.g. by integrated action planning in particular for road hot spots with noise and air pollution

problems. These aspects could be explored further with the view to foster synergies and create experiences.

5.1.4. *Facilitating reporting issues*

The Directive has several cyclical reporting obligations which, in some cases, create an additional administrative burden without generating the necessary added value for EU action. The streamlining of reporting and the electronic reporting processes could be further optimised and used on mandatory base. Other shortcomings which have been highlighted by several Member States were, in particular the input data requirements including coordination, collecting and accessibility of data, lack of data and guidance on quality requirements, problems with the assessment heights. Implementation activities under the INSPIRE Directive³⁷ (e.g. on common noise data infrastructure) may lead to the consideration of further alignments.

5.2. **Legislation regulating noise sources**

Environmental noise is addressed at the EU level through a wide range of instruments including provisions on market access requirements for certain vehicles and equipment, railway interoperability specifications³⁸ and rules on operating restrictions at airports. In addition to the various actions and improvements of EU legislation in this area over the past decade³⁹, the Commission is considering developing these measures further in order to reduce the noise exposure and pollution in the EU. In the Commission Work Programme 2011, a number of important initiatives with regard to noise were included, in particular:

- The **White Paper on Transport**⁴⁰ which provides a roadmap until 2050 to, amongst many other objectives, contribute to the reduction of noise pollution from transport (e.g. action to develop "vehicle standards for noise emission levels");
- The revision of Directive 2002/30/EC on **airport noise** which will, as part of the airport package, improve noise mapping on the basis of an internationally recognised method and data, and drive towards the adoption of cost-effective noise mitigating measure, taking into account internationally agreed standards to streamline the relationship between the airport noise directive and the END. It will also update the definition of noisy aircraft ("marginally compliant aircraft") in line with the current composition of the aircraft fleet.
- The next revision of **noise from motor vehicles** with at least four wheels will, on the basis of an improved test procedure, assess the possibilities of introducing tighter limits ensuring that quieter vehicles are actually being put on the market. This may include a proposal for a regulation relating to the permissible sound level and the exhaust system of motor vehicles. The main objective of the

³⁷ OJ L108, 25.04.2007, p.1-14

³⁸ Commission Decision 2006/66/EC on Technical Specifications for Interoperability "Noise" for conventional rolling stock

³⁹ In particular, revision of EU Rail Noise Policy based on 2008 "Communication on Rail noise abatement measures addressing the existing fleet" and subsequent Commission proposals such as Directive 2001/43/EC on tyre noise and proposals related to noise from L category vehicles regulated by Directive 97/24/EC

⁴⁰ COM(2011) 144 final

initiative is aiming at reducing the negative impact of noise exposure of European citizens caused by motor vehicle traffic.

- The revision of the **Outdoor Noise Directive**⁴¹ will evaluate the scope of equipments covered and revise the noise requirements to reflect the current state-of-the-art technology. At the same time related administrative requirements will be simplified.

In addition, the Commission intends to continue analysing other potential measures to reduce noise pollution at EU level, such as e.g. low noise road surfaces and will come forward with proposals, as appropriate.

5.3. Issues for further consideration

As part of the review, the preparatory work looked also into elements that might need to be addressed in achieving effective and efficient EU-wide legislation on environmental noise. In particular:

- **Trigger or target values:** Member States introduced a wide variety of approaches and level of ambition preventing further convergence towards a level playing field in the internal market and establishing significantly different protection levels for citizens across the EU (cf. 4.2). This being said, the setting of mandatory noise limit/target values at EU level would touch upon subsidiarity issues by limiting the flexibility of national and local authorities to adapt the level of protection and the action plans/measures to their specific situations. Other options could be the establishment of EU noise trigger values, minimum requirements or EU recommendations. These approaches could serve as minimum thresholds to trigger action on noise but would not prevent Member States to set stricter requirements, where necessary.
- **Noise indicators:** In the current Directive, Member States are required to use specified noise indicators of L_{den} and L_{night} and report the noise exposure of the population of 55 dB and 50 dB or more, respectively (cf. 4.2.). However, the current reporting neglects the fact that there is a considerable share of EU population exposed to noise pollution at lower levels which are still likely to cause harmful effects on health (cf. 2). According to the latest WHO recommendations, reporting bands of the indicator values of L_{night} should be lowered to 40 dB, L_{night} in order to achieve a much more realistic assessment of noise pollution impacts across the EU.
- **Enforcement:** The Directive is lacking a clear enforcement regime where action plans are directly linked to exceedances in noise levels and possible penalties even in the cases when Member States have legally binding limit values at national level, the assessment presented by the noise maps revealed that noise limit values appeared often to be infringed without consequences. Clarification on the objectives, the content and the enforcement of action plans could be considered, bearing in mind that the subsidiarity and proportionality principles were respected.

⁴¹ Directive 2000/14/EC on noise from outdoor equipment

- **Technical definitions, requirements and concepts:** A number of possible technical improvements were identified including clarifications of the definitions and obligations related to agglomerations, quiet areas, major roads, industrial noise and action plans. Furthermore, the question of measurement points remained a concern including flexibility regarding the measurement height which caused concern in some Member States because of their specific building structures. Finally, the presentation of values and assessment results would benefit from further clarification or harmonisation.
- **Administrative burden and aligning legal aspects:** There would be scope for streamlining and facilitating the reporting timetable. Some reporting elements⁴² were reported several times. Also it was not sufficiently clear in the END that the different stages in the assessment framework (noise mapping and action planning) were building on each other. Moreover, the short timeline between the strategic noise mapping and the finalisation of actions plans was reported to be one of the main obstacles for carrying out an appropriate public consultation. Finally, the relevant provisions of the END would need to be aligned, where relevant, with the new system of delegated acts and implementing measures (Article 290 and 291 TFEU).

6. CONCLUSIONS

Environmental noise remains a significant problem across the EU with significant health impacts. Based on the information that has become available about the health impacts of noise, it appears that further actions should be considered to reduce the number of people affected by harmful noise levels.

The implementation of the END has just recently entered into an active phase regarding noise mapping and action planning. This first implementation report identifies significant achievements but also several difficulties and areas for improvement. However, the full potential of the END has not been harvested yet. The action plans are only now being implemented and have often not created the envisaged effects (yet).

The Commission will consider further actions as described in this report in relation to implementation improvements and possible measures on noise source reduction. In addition, harmonisation of the assessment methodological framework is under preparation. As part of the review, the preparatory work (cf. 5.3) looked also into elements such as indicators and strengthened enforcement mechanisms that might need to be addressed in the future to achieve effective and efficient legislation on environmental noise.

This report will be the basis for further discussions with Member States and other interested stakeholders to explore the possibilities of improving the effectiveness of the noise legislation.

Independently of this consultation process, it needs to be borne in mind that a more comprehensive and realistic assessment of the effectiveness of the END can only be made after the second round of noise mapping when the knowledge on noise pollution will have improved further.

⁴² E.g. agglomerations, major roads, major railways and airports.