Evaluation of Directive 2002/49/EC relating to the assessment and management of environmental noise

Workshop working paper 1

The second implementation review of the END – emerging findings

September 23rd 2015, Brussels
# Table of Contents

1. **Introduction, aims and scope of the second implementation review**  
   1

2. **Methodology**  
   1

3. **Key findings**  
   2

   3.1 Implementing legislation and competent authorities  
   2

   3.2 Designation of the agglomerations, major roads, major railways and major airports  
   4

   3.3 Noise limits and targets  
   5

   3.4 Definition, delimitation and protection of the quiet areas  
   5

   3.5 Strategic Noise Maps  
   6

   3.6 Noise Action Plans  
   9

4. **Preliminary conclusions**  
   13

5. **Questions for workshop participants**  
   14

6. **Annex I - Assessing the number of strategic noise maps and action plans**  
   14
This working paper summarises findings to date from the second implementation review of Directive 2002/49/EC (the Environmental Noise Directive – the “END”). This study is being led by the Centre for Strategy & Evaluation Services LLP (CSES) and ACCON supported by a further acoustics/environmental consultancy, AECOM.

The purpose of presenting this working paper is to secure the validation by workshop participants of its findings and obtain further feedback from stakeholders unable to attend the workshop.

1. Introduction, aims and scope of the second implementation review

Article 11 of the END requires a review of its implementation once every five years. The first review was carried out in 2010. This contained an EU-level synthesis assessment of the initial state of play in implemented, supported by 27 country fiches. The Commission published a Report\(^1\) on the first implementation review of the END based on this technical study\(^2\).

The purpose of this second exercise is to review the Directive’s implementation since its adoption in 2002, and to identify the main challenges experienced by Member States and their competent authorities in implementing key provisions. The extent to which there have been any administrative, legal or implementation changes since the previous review is also assessed.

2. Methodology

The first implementation review from 2010 was a primary source of information and data, together with national guidelines on Strategic Noise Mapping and Noise Action Planning, websites, and national legislative texts and administrative documents. Data from the Noise in Europe and EIONET country reports have been instructive, and have been supplemented by collecting and checking data on the number of strategic noise maps and noise action plans produced, and submitted to the Commission/EEA as part of reporting procedures, and formally adopted.

Interviews were carried out with at least one designated member from each Member State’s national competent authority as well as other organisations involved in END implementation, such as national road and railway authorities, and local and regional authorities and infrastructure operators. These interviews were used to obtain supplementary information on the END’s implementation, and cross-check and validate information and data provided. Following an initial data collection and analysis exercise, competent authorities were asked to clarify outstanding issues.

To allow organisations we were unable to interview to provide views, several online questionnaires were carried out. 73 valid responses were received from public authorities, 7 from consultancies involved in strategic noise mapping, and 10 from NGOs/community groups. The feedback received was helpful in corroborating the research and the identification of implementation challenges. It was especially relevant for certain issues covered through the second implementation review e.g. whether any problems were encountered with definitions, key challenges relating to noise mapping and action planning, etc.

28 draft country fiches have been prepared and the national competent authority has nominated one person in each country will be asked to review the final version once any data gaps have been completed. At the time of drafting this document, data collection and clarification are still ongoing for:

- Strategic Noise Maps (SNMs) – overall numbers (2 Member States still to provide answers), methodologies and public consultations (7).


• Noise Action Plans (NAPs) – overall numbers (7), methodologies (10), measures (9), and public consultations (10).

• Implementation issues (19).

3. Key findings
The main preliminary findings from the implementation review are now summarised.

3.1 Implementing legislation and competent authorities
The END has been transposed in all 28 EU Member States. The Commission identified that one MS still has shortcomings as regards the transposition of several articles; a validation of the assessment of non-conformity is still outstanding.

For 21 Member States, the END represented the first piece of legislation to specifically address (environmental) noise. The other 7 Member States (Denmark, Germany, Greece, Hungary, Italy, the Netherlands and the UK) had longstanding noise legislation at national level, with the END transposed in addition to an existing body of regulation.

A number of Member States had not fully transposed the Directive by the deadline in Round 1, but the transposition issues identified in the first implementation review have since been addressed by the Member States concerned.

In Round 2, therefore, the main implementation challenges have largely been practical and organisational. That being said, through the research to develop 28 updated country reports, it was noted that a number of Member States, such as Bulgaria, Denmark, Germany, Ireland, the Netherlands and Latvia, have updated national legislation since Round 1. In some cases, this represented a legal codification exercise to consolidate existing legislation (e.g. Latvia), whilst in others, it related to changes to noise legislation that were related to changes in approach to END implementation (e.g. the Netherlands which decided to implement a decentralised approach).

Member States have generally assigned an environment-related ministry or public institution as their competent authority for END-related communication and reporting activities with the European Commission and the European Environment Agency (EEA). In a small number of instances, such as Lithuania, lead responsibility lies with Ministries of Health.

Member States can be categorised into certain clusters in terms of the way they organise the preparation of Strategic Noise Maps (SNMs) and Noise Action Plans (NAPs), with some countries adopting a centralised approach and others a more decentralised approach. It is difficult to establish a general trend in this regard, since this reflects different traditions in administrative systems. A number of Member States have either a decentralised or a federalised implementation system and this is also reflected in their approach to END implementation. For instance, Italy and Spain have a regionalised implementation system, Austria and Germany have a federalised implementation system at the Land / state level, Belgium also has such a system (e.g. Wallonia, Flanders). However, there are further examples of Member States that have decided to implement the END in a decentralised way such as the Netherlands, which recently amended legislation transposing the END so that under the 2012 Environmental Management Act, there will be considerably more decentralisation to municipalities. From 2018, all municipalities will have to produce NAPs and SNMs.
Conversely, other countries have adopted a relatively centralised approach. For instance, although the **UK** has a country-specific approach (e.g. with separate regulations and competent authorities for England, Scotland, Wales, Gibraltar and Northern Ireland), the approach to the development of Strategic Noise Maps and Noise Action Plans has been centralised within each of the five administrations (but with the input and participation of sub-national and regional stakeholders). In **Ireland**, a distinction is made in the law transposing the END between the responsibilities of competent authorities designated as noise mapping bodies, action planning bodies and those that have responsibilities for both mapping and action planning. Here, reference should be made to WP2, the Working Paper on evaluation, since feedback was received on the issue of the non-prescriptive approach in the END to specifying how administrative implementation structures should be set up to implement the END.

Turning to **agglomerations**, local authorities (local and city municipalities, councils) play a key role in Strategic Noise Mapping and Noise Action Planning, together with central/federal bodies, with the latter playing a more important role in approval than preparation. In some Member States, such as **Italy**, even if the mapping and action planning for **agglomerations** is carried out by local authorities, the regional and provincial authorities still play an important role both in coordination and in gathering data for reporting purposes.

In relation to **major roads**, the implementation approach was partly dependent on how road networks are organised. Variations between MS as to how major roads are dealt with administratively under the END are therefore largely a function of whether roads are managed by a central/federal authority, the mix between local and national roads (within the END’s scope), and the ownership of road infrastructure operators.

In most EU countries, National Road Authorities (NRAs)\(^3\) played a central role in relation to noise mapping in both Round 1 and 2. National competent authorities are typically responsible for approving road NAPs. Local authorities are also involved in mapping roads located within their agglomeration, but are often dependent on NRAs for mapping major roads within their agglomeration and for roads bordering the agglomeration. Regional bodies also play an important role. For instance, in **France**, roads are a state competence, but road Noise Action Plans have been prepared at a departmental level.

In **Ireland**, the NRA is responsible for noise mapping but not action planning. In **England**, although the NRA, the Highways Agency, does not have direct responsibility for preparing noise action plans, it works very closely with the Department for Transport and Defra, the overall lead for END implementation.

With regard to major **airports**, airport (both state and private sector) operators are strongly involved in Noise Map and Action Plan preparation, as well as their implementation. In some countries, airport infrastructure is privately owned (e.g. DK, IE and the UK) while in others it remains managed by the public (e.g. FR). In some countries, it may be a combination of the two. In addition, many national authorities, such as Ministries of Transport, play a role in signing off Airport Action Plans. This is sometimes seen as part of good governance arrangements in that there were concerns when the Directive was adopted in some countries about private airport operators also being responsible for mapping the noise levels generated by airports that they operate on a commercial basis.

**Railways**-related Noise Mapping and Action Planning activities are carried out differently in different countries. In some countries, Ministries of Transport and their equivalent are closely involved (e.g. the UK but working in close conjunction with the private railway infrastructure manager), whereas in many other countries, the state railways take the lead role as the competent authority, at least for noise mapping (e.g. **Ireland** and **Italy**).

---

3 See for instance the END and NRAs – Final Summary Report CEDR Road Noise 2009-2013
3.2 Designation of the agglomerations, major roads, major railways and major airports

The final thresholds envisaged in the text of the Directive used in Round 2 had a material impact on the number of agglomerations covered by the END and the amount of mapping required for roads and railways. The table below presents the numbers of agglomerations, airports and km of roads and rail designated in Round 1 and Round 2 and also the magnitude of the changes:

Table 1 – Designations in Round 1 and Round 2

<table>
<thead>
<tr>
<th>EU28</th>
<th>Round 1</th>
<th>Round 2</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agglomerations</td>
<td>176</td>
<td>475</td>
<td>2.7</td>
</tr>
<tr>
<td>Airports</td>
<td>73</td>
<td>92</td>
<td>1.3</td>
</tr>
<tr>
<td>Rail (km)</td>
<td>31,576</td>
<td>72,195</td>
<td>2.3</td>
</tr>
<tr>
<td>Road (km)</td>
<td>67,488</td>
<td>150,202</td>
<td>2.2</td>
</tr>
</tbody>
</table>

Although there are variations, the fact that the definite Round 2 thresholds are 50% lower for major roads and major railways, and the change in thresholds for agglomerations from >250,000 to >100,000 people has led to a significant increase in the km of major roads and railways within the scope of the END, as well as the number of agglomerations and airports to be covered. However, the coverage of airports has hardly been extended at all, since the definition of the size thresholds falling within scope has not changed between Rounds.

The scope of END coverage increased significantly in Round 2 now that the definitive threshold will be applied (also in future rounds) in most Member States. Almost half of Member States experienced increases of a much higher order, with this often being a function of a (relatively) low Round 1 baseline, as illustrated in the Figure below, which shows, for example, coverage having increased:

- 5 times the number of agglomerations in Austria (1 to 5)
- 7 times the amount of km’s of major roads within the scope in Ireland in SNM (564km to 3500 km), even though the numbers of SNM did not change.
- 12 times the amount of km’s of major roads covered in Bulgaria (89km to 1 044 km)
- 35 times the amount of km’s of major rail covered in Hungary (25 km to 914 km)

Figure 1 - Changes in END scope between Round 1 and 2

<table>
<thead>
<tr>
<th>EU28</th>
<th>Round 1</th>
<th>Round 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agglomerations</td>
<td>176</td>
<td>475</td>
</tr>
<tr>
<td>Airports</td>
<td>73</td>
<td>92</td>
</tr>
<tr>
<td>Rail (km)</td>
<td>31,576</td>
<td>72,195</td>
</tr>
<tr>
<td>Road (km)</td>
<td>67,488</td>
<td>150,202</td>
</tr>
</tbody>
</table>

Examples of some of the implementation challenges identified in both Rounds 1 and 2 or occurring for the first time in Round 2 are Member States:

- Lack of clarity around the definition of, and the delimiting method for agglomerations (4 Member States- BE, FR, LV, UK);
- Complex competency arrangements leading to delays (4 Member States – AT, HU, IE, IT)
• (Initial) confusion regarding administrative responsibility (3 Member States– LT, NL, RO);
• Issues around the definition of main roads within major roads mapping (e.g. DK, EE where the threshold of 3 million vehicles per year is not directly in line with the national categorisation, the UK where adjacent sections fell above and below the threshold, and similar issues for rail); and
• Lack of coordination between different responsible authorities, resources and personnel (in countries with a more decentralised approach to END implementation, such as ES, FR).

3.3 Noise limits and targets
The first implementation review report highlighted that most Member States (21) had noise limit values which were legally enforced and whose transgression should in theory have led to measures to control noise and/or insulate exposed populations, and/or in some countries the imposition of penalties on those responsible for the source. In practice, Strategic Noise Maps revealed that their transgression neither led to measures being implemented nor any specific action being taken, although they did inform Noise Action Plans in those countries.

Round 2 responses indicated that no change in enforcement of noise limit values (LVs) have been made by MS. However, among the 75% of Member States that have noise limits, less than 25% were able to confirm categorically that these LVs were (fully) enforced.

Since noise limits are not prescribed by the END, Member States were not asked to report back in the country report on whether there were any specific implementation challenges in applying these. However, feedback collected through the interviews included an indication that it is sometimes difficult to convince policy makers in other areas of the need to enforce national limit values, given the trade-off between economic development and growth objectives and environmental and human health policy objectives. Weak enforcement of noise limit values in cases of exceedance was a recurring theme in many countries.

3.4 Definition, delimitation and protection of the quiet areas
The END definition of quiet areas in agglomerations and open country gives considerable discretion in their delimitation by Member States. Noise Action Plans for agglomerations should aim to protect quiet areas, but there are no specific requirements for the protection of quiet areas in open country. The vast majority of EU Member States have still not designated any (END-related) quiet areas. In the Netherlands, there were already “protected quiet areas” prior to the adoption of the END in national legislation and in the UK, although there are no quiet areas in England, protected areas that are also regarded as quiet areas have already been designated under the Habitats Directive.

In three Member States, (e.g. Greece, Hungary and Latvia), quiet areas have so far only been defined in agglomerations but not in open country.
The number of quiet areas has increased by some 50% in Round 2, but this was accounted for by only five Member States: Austria, Hungary, Ireland, Lithuania and the UK (Scotland and Wales only – the position in England was highlighted above).

Despite the limited take-up of quiet areas, a lot of groundwork has been carried out to define quiet areas between R1 and R2, to develop selection criteria and in the case of a few Member States, good practice guidance.

Implementation challenges with regard to quiet areas in Round 2 are listed below. This includes both issues that remain problematic from Round 1 and the identification of new issues that only emerged in Round 2:

- The definition of quiet areas in the Directive for agglomerations remains unclear in the view of at least some END stakeholders - not only the competent authorities (3 Member States – Belgium, Latvia and Lithuania);
- Problems in the designation of quiet areas, despite criteria having been developed for the selection of quiet areas (several Member States);
- The problem of defining quiet areas in rural locations based on noise measurement. An interesting example was cited in Ireland of an isolated beauty spot that had been nominated as a quiet area but which registers high on natural noise levels (e.g. wind);
- In the Netherlands, there is a problem that since the concept of “protected quiet areas” existed in Dutch legislation prior to the END’s implementation (under the responsibility of the Dutch provinces), under the END, local authorities are responsible for the designation of quiet areas, and there is a lot of confusion between quiet areas under the END and other types of protected areas, which are characterised by quiet; and
- The possible double designation of the same geographic areas as a quiet area under the END and as a protected area under the Habitats Directive was mentioned as a problem in England. However, this does not appear to constitute a problem in other EU countries.

### 3.5 Strategic Noise Maps

The focus through the country reports has been on collecting data across EU28 on (i) the numbers of Noise Action Plans and Strategic Noise Maps and (ii) in the case of roads and railways, on the volume of noise mapping, not only the absolute number of noise maps. Clearly, the final report will need to be based on updated official data from the EC/EEA’s reporting systems. In the interim, use has been made of the EEA data from June 2014.

The EEA Report from mid-2014 measured the degree to which SNMs were completed in Rounds 1 and 2 based on the gap between the number of SNMs to be developed according to source data provided by the Member States and the number of SNMs actually reported to the EC 2 years later, as shown in the table below (the % show level of completeness). This analysis clearly indicated that there has been a significant delay in noise mapping for a number of Member States.

**Table 2 – Completeness of SNMs – gaps between number initially envisaged and number reported to EC**

<table>
<thead>
<tr>
<th></th>
<th>Agglomerations</th>
<th>Roads</th>
<th>Railways</th>
<th>Airports</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>86-94%</td>
<td>90%</td>
<td>87%</td>
<td>95%</td>
</tr>
<tr>
<td>2012</td>
<td>44-62%</td>
<td>63%</td>
<td>60%</td>
<td>62%</td>
</tr>
</tbody>
</table>

*Source – EEA report, Noise in Europe, 2014*
Note – variations for agglomerations depending on type of SNMs (road, rail, aircraft, industry)

Overall, it is noticeable that the level of data completeness in Round 2 is significantly below the corresponding level of completeness in Round 1, at least in June 2014, which was almost two years after the required submission date for Round 2 SNMs. This is the case for agglomerations and across all transport modes covered by the END. The level of completeness varied between Member States, but was as low as 44% for agglomerations, although the upper estimate of the range was 62%. In assessing data completeness, the Commission and the EEA take into account any differences reported by the Member States as to what was initially going to be reported and what was actually reported so this suggests a major implementation gap and time delays in Round 2.

It was however pointed out by a large Member State that some countries have submitted data into the EC’s reporting system late by a month or two after the cut-off date so the position in September 2015 should show progress compared with the significant implementation gaps in June 2014. Nevertheless, it is clear that in Round 2, major implementation challenges remain for many Member States in terms of the timeliness of submission.

In order to overcome challenges in relation to data availability and to ascertain the latest position, the consultancy team has also sought to collect data directly from Member States as part of the process of the development of the 28 country reports. As mentioned in the explanatory note, the process of updating EEA data from the June 2014 data cut-off point is ongoing and data collected through the development of country reports is being utilised to supplement available data on SNMs.

The purpose of the following table, which is based on data we have collected, rather than EEA data, is to show the evolution between rounds in terms of the scale and scope of strategic noise mapping. The intention is not to suggest that a significant increase in the volume of mapping represents progress per se, since the Round 2 thresholds were already envisaged in the text of the Directive.

Despite the fact that a number of Round 2 Strategic Noise Maps have yet to be formally adopted when the research was being carried out (August 2015), based on a bottom-up assessment by aggregating data collected through the country reports, 1,194 maps were delivered in Round 2 compared with the Round 1 figure of 6355.

Table 3 Change in the number of Strategic Noise Maps between Rounds 1 and 2 (transitional to definitive thresholds for the END).

| Source – Own data - synthesis of changes between Round 2 from Round 1 in the number of SNMs delivered; based on data collected in the preparation of 28 country fiches by CSES and ACCON. |
|---|---|---|---|---|---|
| All Member States have continued to use the required $L_{den}$ and $L_{night}$, while some have also chosen to use additional indicators, including $L_{day}$ and $L_{evening}$. |
| Significant use has continued to be made of various reference documentation, including the Good Practice Guide to Strategic Noise Mapping produced by the EEA. In addition, compared with Round 1, there appears to be significantly more national guidance available. In the case of those Member |

| Table 3 Change in the number of Strategic Noise Maps between Rounds 1 and 2 (transitional to definitive thresholds for the END). |
|---|---|---|---|---|
| | Agglomerations | Airports | Road | Rail | TOTAL |
| Round 1 | 152 | 67 | 267 | 149 | 635 |
| Round 2 | 364 | 77 | 468 | 285 | 1,194 |

Data on road maps in Poland in Round 2 is still being verified and has been excluded from the calculation of total number of noise maps for the time being.
States that had already adopted guidance for Round 1 noise mapping, a number of Member States have updated their guidance (e.g. IE, UK, LU and LV).

3.5.1 Implementation challenges – strategic noise mapping

There are a number of implementation challenges that persist in Round 2 in Strategic Noise Mapping. These are outlined based on the frequency that they were cited).

- A lack of sufficient human and financial resources to meet noise mapping commitments in full, or a lack of speed allocating those resources made it difficult to meet deadlines (15 Member States – AT, BE, BG, CZ, ES, HR, FI, IT, LV, LT, PL, RO, SE, SK, UK);
- Additional resources needed to account for the full implementation scope in Round 2 (4 Member States – IE, LU, PT, RO, SK);
- Lack of centralised, complete and consistent traffic, spatial input and emission data (7 Member States – BE, BG, CZ, FR, HR, IT, RO) – often, estimates were used when actual data was unavailable (e.g. in FR for road data);
- Ensuring access to reliable input data is vital for the measurement of noise, since producing reliable output data is pre-conditioned on the availability of quality input data. However, in Round 1, there was a general problem in terms of the lack of availability of input data and/or the poor quality of inputs data. In Round 2, the lack of adequate input and compatible data remained an important issue (11 Member States – BG, CZ, EE, FR, HR, HU, LV, LT, NL, RO, SE). Examples of the specific problems that were identified are: assigning accurate population data to estimate the average number of people per dwelling and inaccuracies and absent data have made it difficult to calculate noise exposure accurately, even when the number of buildings is known.
- In some Member States, a further problem was that there was a lack of effective coordination among competent authorities responsible for the END in the collection, management and administration of input data for noise maps (6 Member States – AT, CY, DE, FR, NL, PT);
- Lack of data comparability between Rounds 1 and 2 due to the methodology applied having changed (e.g. DK, NL). The issue of comparability was found to affect different sources to varying degrees of magnitude. For instance, airports tend to be more comparable between rounds, since the thresholds have not changed (although there may still be differences, e.g. in input data, methodologies, software to estimate noise exposure); and
- Lack of a suitable system that would allow input data to be easily updated in subsequent rounds rather than to start afresh (CY).

Several issues that impede the efficient implementation of the END were also highlighted by respondents to the online survey. While problems in Round 1, such as poor quality noise maps and data collection and input quality data issues, have largely been resolved according to more than 50% of respondents (although challenges in relation to the lack of quality input data remain in a number of EU countries), other issues such as a lack of interest in, and understanding of the potential utility of the results of Strategic Noise Mapping, especially at local level, remains in some countries.

3.5.2 Making information accessible to the public

Article 1(1)b of the Directive requires Member States to “ensure that information on environmental noise and its effects is made available to the public”. Through the second implementation review, we assessed the extent to which such information is being made available through the country reports.
The provision of Strategic Noise Maps online is the predominant means of providing noise maps and information on population exposure in a clear, comprehensible and accessible manner. A number of stakeholders confirmed that there were challenges in ensuring that noise maps were correctly interpreted by those using them. Some Member States, such as Ireland, have therefore sought to ensure that noise maps by source are not misinterpreted through the inclusion of a list of FAQs.

3.6 Noise Action Plans

This Section summarises the implementation findings in relation to Noise Action Planning. As explained in the previous section on Strategic Noise Maps, the total number of NAPs is less relevant than the completeness of information that was meant to be reported to DG ENV. However, whereas the EEA reported on the number of SNMs in the Noise in Europe Report, data on the completeness of information reported is not available at the present stage in the study. This data will instead be obtained during the later stages of the study from the EIONET reporting system.

However, as with the significant increase in the expected number of SNMs, it can be reasonably assumed that there was a major increase in the number of expected Noise Action Plans due to the transition to the final thresholds for agglomerations, major railways and major roads falling within the scope of the END.

However, given the indications that the number of SNM submitted in Round 2 has been lower than expected, there is an inevitable knock-on effect in terms of the lack of completeness of information reported to the Commission in terms of the number of (related) NAP.

Although there remain data challenges at this stage in the study, it is clear that as with the number of SNMs, the transition to the definitive END thresholds in Round 2 has led to a significant increase in the number of NAPs. At an EU level, the data provided to us by Member States for the country reports indicates that the number of NAPs per SNM has increased.

In Round 2 NAPs, Member States adopted measures which are broadly similar to those in Round 1 NAPs. The types of measures that are most effective in noise mitigation, abatement and reduction are relatively well known and require a long-term approach. There are many examples of measures that are mentioned in Action Plans in both Round 1 and 2, and those that continue to be implemented over a period that extends between Rounds. The most frequently mentioned measures in NAPs analysed in the 28 country reports are: technical measures, noise insulation, land-use planning, traffic planning, quieter road surfaces and the installation of noise barriers.

In Round 1, several Member States developed national guidance on Noise Action Planning. Those with legally binding noise limit values and guidelines had generally used exceedance as the basis for establishing Noise Action Plans to tackle noise on a prioritised basis.

Member States that specified that they used health-based assessments in the establishment of priorities include Cyprus, Finland, Romania and the Brussels Administration of Belgium. The use of population exposure as a criterion to establish priorities was also common. A similar profile was seen in Round 2, although Noise Action Plans were still being developed and/or subject to approval in Q2 2015 for a number of Member States.

Implementation issues with regard to Action Planning that persisted in Round 2 were:

- The timespan of 12 months between Strategic Noise Maps and Noise Action Plans is considered too short (15 Member States– AT, BE, CZ, FI, EL, FR, HU, LV, NL, PL, PT, RO, SE, SK, UK);
- Lack of guidance on Action Plans and on cost-benefit analysis;
- Lack of enforcement mechanisms for noise-reducing measures (5 Member States- BG, DE, DK, LT, RO);
- Lack of participation in public consultation (5 Member States– DK, EE, HU, NL, UK);
• Lack of experience and appropriately qualified local specialists (LV, PL, RO);
• There were examples of insufficient consultation between local and national authorities in instances where local authorities were responsible for action planning but the measures mentioned in NAPs implied significant expenditure on the part of national-level public authorities (e.g. IE, LT). In such instances, there was viewed to be little realistic chance of measures being implemented, at least during Round 2.
• Lack of assessment of the economic impacts of proposed measures in NAPs adopted (CZ);
• A lack of adequate budget to implement measures that require expenditure

In terms of public information accessibility, the majority of Round 1 NAPs have been published online. In relation to Round 2, as detailed earlier, there have been major delays in reporting NAPs to the European Commission in some Member States. This has meant that it is comparatively difficult for EU citizens, civil society organisations and NGOs to obtain information in some countries.

Article 8 obliges competent authorities to consult with the public on draft Action Plans prior to their finalisation. These include giving early and effective opportunities to participate in the preparation and review of Noise Action Plans, with the results taken into account and the public kept informed about the decisions taken. Competent authorities in Round 2 used a range of mechanisms to meet these obligations, with websites being the most commonly used method to keep the public informed, although examples of other approaches were also identified, such as holding public meetings and workshops during the action planning process.

There were a number of findings from the implementation review in relation to how Member States manage public consultation processes, and feedback on the extent to which (or not as the case may be) holding consultations has had any effect on improving the quality of Action Plans. A further consideration was whether consultation procedures have had any impact on improving the outcomes associated with implementing action plans (and the measures contained therein). Among the findings in relation to public consultation were that:

• An effort has been made in many EU countries to ensure that EU citizens have a number of different means available to them in order to obtain copies of draft Noise Action Plans to enable them to participate in public consultation.
• For example, in addition to making NAPs available online, in some instances, hard copies have been made available at the offices of local or regional authorities, public meetings and workshops have been organised and held, and adverts have been taken out in newspapers & other media to inform the public about these meetings and to provide advance notice that a public consultation will take place.
• In many countries, between 4-8 weeks consultation period was given to provide feedback on draft NAPs. For instance, in France, 8 weeks was the norm (although the need to give due consideration to the results from public consultation was also cited as one of the reasons for the delay of the finalisation of Round 2 NAPs).
• However, examples were also cited of insufficient time being given to review draft NAPs and to provide feedback, such that the effectiveness of the process was considered by NGOs and community groups to have been undermined in some instances. It is inappropriate to label particular countries in this regard, since in some countries, both negative and positive feedback was received with regard to experiences of participating in public consultations.
• Some EU countries (e.g. France, Germany, Lithuania, Luxembourg and the Netherlands, among others) have made a concerted effort to promote participation in public consultations.
• However, it was noted that even in these countries, and especially in countries that have not made such an effort, that it was often very difficult to engage with the public and to interest them in participating in a public consultation on draft noise action plans.
• Problems were identified in securing adequate participation from either the public or relevant stakeholders such as NGOs/ community organisations in some MS (e.g. EE, EL, FI, HU, NL, UK), even where the role of public consultation had been well-publicised in advance.
• In many cases, competent authorities confirmed that it was difficult to obtain a sufficient number of responses to be considered representative. Indeed, many competent authorities interviewed stated that they received very few (or no) responses to public consultations. As a consequence, they regarded the process as being ineffective.
• Moreover, there were concerns about the quality of consultation input among competent authorities. It was viewed as being risky to rely on contributions from individual citizens who may not be that well informed. It was viewed as being more effective to engage with NGOs having the necessary technical capacity to be able to provide a useful input to public consultations.
• However, this was not the case in all EU countries. For instance, the feedback received through public consultation was regarded as being highly useful and was taken into account in the revision of Noise Action Plans in countries such as Germany and Luxembourg.

A number of NGOs and local community groups have been interviewed through the research. Among the feedback received in relation to their experiences of participating in public consultations were that:
• There were concerns with regard to the efficiency / effectiveness of public consultations. For example, examples were cited of consultation feedback seemingly not being taken into account (UK). There was a perception among some NGOs / community groups that consultation involved going through the motions rather than leading to tangible changes in the final drafts of NAPs.
• There was also a frustration in some countries that action planning was “all planning and no action” due to competent authorities responsible for NAP implementation often lacking sufficient budget to implement the measures included in the NAP (which are often dependent on securing budget from other policy areas).
• The above points were seen as factors potentially reducing the level of participation in public consultations in subsequent rounds of END implementation.
• More positively, even though some NGOs/ community groups were disappointed by the perceived level of impact their feedback had had on the NAP, it was appreciated to at least have the opportunity to review and comment on the NAP.

The figure below summarises key implementation issues related to noise mapping and action planning, as based on feedback from competent authorities contacted this study. The most commonly cited ones are highlighted in red. For example, 58% of competent authorities responding to our queries stated that a lack of adequate budgets is an issue that affected them in both Round 1 and 2.

*Figure 2 – Extent to which competent authorities agree that the problems listed below are as serious in Round 2 as they were in Round 1*

Survey results – Member State Competent Authorities interviews?
The problem is as serious now as it was in Round 1

<table>
<thead>
<tr>
<th>Issue</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poor quality Noise Maps</td>
<td>6%</td>
</tr>
<tr>
<td>Poor data quality</td>
<td>11%</td>
</tr>
<tr>
<td>One year to develop Action Plans (is too short)</td>
<td>53%</td>
</tr>
<tr>
<td>A lack of technical expertise</td>
<td>8%</td>
</tr>
<tr>
<td>A lack of adequate budgets</td>
<td>58%</td>
</tr>
<tr>
<td>A general lack of political will at regional level</td>
<td>49%</td>
</tr>
<tr>
<td>A general lack of political will at local level</td>
<td>52%</td>
</tr>
<tr>
<td>Coordinating bodies when implementing Action Plans</td>
<td>20%</td>
</tr>
<tr>
<td>Coordinating bodies for data collection</td>
<td>18%</td>
</tr>
<tr>
<td>Establishing responsibilities when different modes intersect</td>
<td>37%</td>
</tr>
</tbody>
</table>
4. **Preliminary conclusions**

A number of conclusions are now provided.

- There are wide differences in the approach to END implementation, with a combination of centralised and decentralised approaches, reflecting the subsidiarity principle.

- The move from the transitional to the definitive thresholds for when agglomerations, major railways, major roads and airports fall within the scope of the END has had a material impact on the scope of END coverage in most Member States, with a significant increase in the number of SNMs and NAPs to be produced.

- Almost all Member States that have developed Strategic Noise Maps in both Round 1 and have made these available online. However, the delays in Round 2 have meant that some SNMs are still not easily accessible online by EU citizens and NGOs/community organisations.

- Challenges related to noise mapping include a lack of human and financial resources, and a lack of adequate data, complex competency arrangements and associated lack of coordination, among others.

- Input data were not always readily available either in Round 1 or Round 2, although there have been improvements in Round 2.

- The available data from aggregating the number of Round 2 Noise Action Plans (NAPs) through the country reports suggests that the number of NAPs has more than doubled.

- The total number of NAPs to be delivered is however expected to be higher, since there are delays in many Member States preparing and submitting Round 2 NAPs to the EC.

- Measures to be implemented in Round 2 NAPs were broadly similar to those identified in Round 1 NAPs, reflecting the need for a long-term approach and continuity with the period of implementation of measures often extending between Rounds.

- Many competent authorities interviewed stated that they had received very few or no public consultation responses. As a consequence, they regarded the quality of input to strengthening NAPs as being ineffectual and the process ineffective. However, this was not the case in all EU countries. Some Member States have incorporated public consultation into the development of the final version of NAPs, rather than considering them external contributors.

- A lack of sufficient guidance on Noise Action Plans, the too short timespan between Noise Maps and Action Plans, and the difficulty in identifying budget for noise mitigation and reduction measures were cited as among the main implementation challenges in action planning.

- Noise limits values have been set in 21 Member States. However, the research identified limited evidence of the enforcement of these in both Rounds 1 and 2.

- The majority of Member States have yet to designate any (END-related) quiet areas. However, those that have done so increased their number significantly in Round 2.

- The EEA Good Practice Guide and national guidance documents have helped to inform the preparation of Strategic Noise Maps in many Member States. Experiences gained during Round 1 implementation by competent authorities was seen as having helped to strengthen the familiarity of both competent authorities and external acoustics consultants working on noise mapping and noise prediction calculations on noise exposure with different national and interim methodologies.
5. **Questions for workshop participants**

1. Are there any findings with which you strongly agree/ disagree?
2. Are there any additional implementation issues not already raised?
3. Across the EU as a whole, there have been major delays in Round 2 implementation and in the delivery of Noise Maps and Noise Action Plans to the EC and in providing the corresponding reporting information through EIONET. Please comment on the main problems and explanatory factors behind these delays.
4. Please comment on which implementation issues that were major challenges in Round 1 have been resolved in your country during Round 2, and how.
5. Is there a need for additional guidance by the EC and EEA with regard to the implementation of the END in subsequent rounds? If yes, which particular areas/ aspects?
6. Please comment on the appropriateness of existing timelines for the submission of Noise Maps and Action Plans and on the appropriateness of the five year mapping, action planning and reporting cycle overall.
7. Is there a need for clarification of the END’s provisions, for example in relation to quiet areas and agglomerations?
8. What in your view are the main challenges in relation to quiet areas and why are there so few quiet areas even in Round 2 of implementation?

6. **Annex I - Assessing the number of strategic noise maps and action plans**

**Explanatory Note - Assessing the number of strategic noise maps and action plans**

Although a relatively crude measure, in the absence of a full dataset showing data completeness of reporting information provided to the Commission, the purpose of analysing the number of Strategic Noise Maps and Noise Action Plans is to demonstrate the evolution in the volume of noise mapping and action planning between Rounds 1 and 2. This reflects the fact that whereas in Round 1, the thresholds for the END were transitional, in Round 2, they were definitive.

Due caution needs to be exercised in analysing the absolute number of Strategic Noise Maps and Noise Action Plans given the variation in the scale and approach within and between the various noise sources and different MS. Moreover, under the subsidiarity principle, some Member States have implemented the END on a centralised basis, whereas others have implemented on a decentralised basis. Therefore, the number of SNMs and NAPs varies widely. In EU countries where a centralised approach has been adopted, there are considerably fewer noise maps (and sometimes also action plans), but for instance a single noise map may cover a very large area and the maps may be used for a number of different action plans.

The latest available EEA reporting data relating to END implementation at national level dates from June 2014. In terms of the reliability of the data, the EEA had to have a cut-off date in order to analyse the data in the Noise in Europe report. However, there are many data gaps partly since some Member States missed the initial cut-off date in reporting (but have in the meantime submitted the reporting data) but mainly because of delays in the submission of Round 2 SNMs in some countries. Moreover, the database covers Strategic Noise Maps but does not cover Noise Action Plans.

In order to overcome the data challenges, in the development of the country reports, Member States have been asked to provide data and information on the current state of play in the submission of SNMs and NAPs that were meant to be reported/ have been reported to the EEA / EC. At interim stage, the work is incomplete and the assistance of competent authorities in completing the data would be appreciated.
In addition to looking into data on the total number of SNMs and NAPs reported and delivered, the change between rounds in the total km of road, total km of rail has also been examined. Data has been provided based on bottom-up data collection through the country reports. Through the case studies, changes in the total number of persons exposed by dB threshold has also been analysed.

More recent information is not yet available on the number of SNMs (compared with June 2014) that have been submitted to the European Commission and EEA compared with what was meant to be reported. Data is not yet available on the number of NAPs.

Data on the completeness of END implementation is expected to be provided to the contractor later in the study and will be analysed in detail.