

Differences between the Principles of the European National Noise Laws and those of the Environmental Noise Directive

Gaetano Licitra

Department of Lucca Province, ARPAT, Lucca, Italy.

Summary

The implementation of the END (Environmental Noise Directive 49/2002/EC) has undoubtedly improved noise environmental policies across Europe and related development could be found even outside EU countries, since the attention to noise has been arisen. On the other side, its implementation is a challenging task for local administrations, as for new countries that are approaching to EU. Coexistence of national laws, often requiring different indicators, complicates and duplicates work for administrations and doesn't help comprehension of the citizen about principles of EU legislation. The attempt of reducing this distance could come by a new law in Italy that will be here described. It plans to harmonize existing laws with the END, anticipating some aspects that could be issued by the new reviewed directive.

PACS no. 43.50.Sr, 43.50.Rq

1. Introduction

The implementation of the END [1] has undoubtedly improved noise environmental policies across Europe and related development could be found also outside EU countries, as the Asian countries, since the attention to noise has been arisen. Data of NOISE observatory (Noise Observation and Information Service for Europe) of EEA, built on the base of noise data coming from Member States in the two past rounds, clearly showed how much noise exposure is high in Europe in all Member States [2]. Theoretically, all the Member States implemented the END and its transposition laws, but there are different backgrounds and previous legislations. After first round in 2007, anomalies associated with the END data for major roads in European member states were [3]. Generally, differences in the data are present, but they are due to different implementations of the Directive 49/2002/EC and, above all, to different methods to calculate the exposure, rather than to the true actions performed to reduce it. National computation methods for noise prediction were used without a true control of their equivalence with the interim methods to guarantee reliable comparison of results. Finally, it is well known that source description is crucial in

mapping procedures: not only mapping methods may differ, but also the considered sources, as well as the exposure evaluation methods [4].

In some way, the failed the goal to permit a comparison between public exposures in Member States [5] or between the effects of good practices carried out by cities or regions or any other entities in charge of them.

EU Commission promoted a review of the implementation of the directive in the Member States [6] and presented the due report to the European Parliament and the Council [7]. Finally, DG Environment promoted the development of a new common method (CNOSSOS) to evaluate the exposure and the Annex II revision process of the is going on, promising an improvement in the comparability of the noise mapping results [8].

2. END and National laws: differences and needs of harmonization

If steps forward were done (and many others are going on and are necessary) to harmonize modelling and prediction of environmental noise and to develop a common approach to evaluate public exposure, on the other side, implementation of the END is a challenging task for local administrations, as for new countries that are approaching to EU. Coexistence of national laws, often requiring different indicators, complicates and duplicates the work for the administrations

and does not help comprehension of the citizen about principles of EU legislation.

In the Meliù report [6], differences in existing limits, agglomeration identification, temporal subdivision of the day in the three considered periods, indicators, quiet areas definitions, industries involved, etc. were highlighted. Factors as social behavior due to cultural differences, meteorological conditions, legislative backgrounds etc. determine different approaches in the transposition of the END, as moreover it happens for other topics and directives.

In order to achieve the END promulgation, there was need of a general consensus and a compromise was looked for. In my memory, thirty-five versions were discussed in the international working group of noise experts set by DG Environment before to present the directive to the Parliament.

It is evident that in the 2000's an accommodating approach was necessary to break resistances, taking account that the END was the first common law on assessment and management of environmental noise, in order to start regulating it at EU level, when many Member States had not any framework law.

Many "open doors" were, in fact, left, in order to permit to the Member States different choices, as:

- temporal periods of the day;
- noise limits;
- not stringent definition for agglomerations, quiet areas, extension of the road network in noise mapping, etc.;
- sources included in the field of application, considering explicitly only transportation and industrial sources.

If unbiased data are essential because the END noise exposure data are the driving force in noise abatement on an European level as well as on a national level, differences in limits lead also to different thresholds for implemented action plans, for example as including or not the protection of quiet areas.

In fact, those areas could be preserved either giving low limits or just including them at planning stage. However, there is no agreement of what a quiet area must be neither in terms of levels nor in terms of minimum extent [9].

3. Perspectives in Italian Legislation

Waiting for a reviewed directive, at National level it is important that the END implementation does not remain a bureaucratic duty, an external law in the national framework or regulation.

In October 2014, for the third time in the last years, a new law (LEGGE 30 ottobre 2014, n. 161 [10] was approved by Italian Parliament. It issues a revision of the National Framework Law on environmental noise (Legge 26 Ottobre 1995, n. 447) [11] in order to harmonize it with the Directive 49/2002/CE and its Italian transposition law (Decreto Legislativo 19 agosto 2005, n. 194) [12].

As in some other Member States (MS), in Italy the National Framework Law on environmental noise was issued before the END. So the directive was transposed, but its implementation was only partial and the previous law and the new one are parallel in forced with different approaches and duties.

As we could understand, the process of harmonization of both legislations (EU and National one) is really complex. At this stage, starting from the published END and its implementation in Italy, we could observe there are clearly defined some topics (kinds of sources, management actions, processes to mitigate noise, etc.) reserved to the National legislation (in figure 1, A), other reserved to EU level (C), and finally topics on which both of levels are concurrent (B). Other topics are not regulated yet (D) and each of both sides could do it, everyone partially. Working on both sides (EU and MS) we could change the distribution of topics and duties and enlarge or reduce spaces of action of the two political entities (EU and MS).

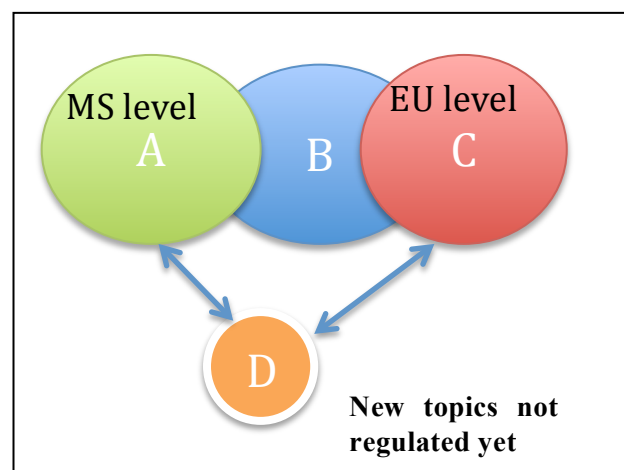


Figure 1. Environmental noise topics: regulated at MS level (A), at EU level (C), regulated in a concurrent way (B) and not regulated yet (D).

In any MS, some topics are an own specific duty through their administrations: urban planning, traffic regulation, recreational area management,

etc. General indications could come from EU level, but not as mandatory rules. Vice versa regulations of noise emitted from single sources is at EU level, to guarantee free circulation in the market, as well common indicators, prediction methods etc.

An open question is if common limits are due or not. In this moment, any member state is free to choose any regulation, but this introduce differences in health protection and affects timing and relevance of action plans.

What is going on in Italy is working on A to move topics to B, to avoid duplications. How much this will be possible is too early to say. Reasons of effectiveness suggest doing as more is possible, resistances to change and uncertainties in the process suggest to act as less as possible.

The Government should issue within eighteen months (so before June 2017) a number of decrees that will treat different aspects. Among them, some crucial points should be defined following these criteria ad principles:

- a) To harmonize existing mappings and remediation plans with the strategic noise mapping and action plan criteria, in order to avoid duplications. In fact, in Italy any city with more than 50.000 inhabitants has to produce a noise map and a remediation plan, where the single action is described in detail in order to avoid exposure exceeding national limits. The strategic approach of the END is different focusing on a step-by-step procedure based on five years verification, while the Italian one asks to end the single action with the respect of existing limits. The Italian remediation plan is a sum of single actions; the action plan issued by the END is a strategic vision of environmental noise problems that tries to involve different actions as traffic regulation, modal shift, zoning, planning, etc. Similarly, for transportation noise sources (road, railway and airport sources), an harmonization will be necessary, considering that in Italy limits for existing infrastructures and not only for the new ones are issued (as in France and in few other member states).
- b) To transpose Italian limits in European descriptors (L_{den} and L_{night}). In fact, limits in Italy are expressed as L_{day} and L_{night} , so municipalities and infrastructure owners produce two noise maps with the two different indicators, and action plans are referred to Italian descriptors and further calculations are produced to inform the

Commission. An effort is requested to introduce procedures suitable to a proper transposition of the limits.

In order “to move topics” from A to B, it is necessary for example in Italy to change approach in action plan definition and its management: take into account that reduction of noise is a complex, long and costly process, so mitigation is a step by step process, starting from the worst cases. One thing is in fact to guarantee noise levels that give good comfort; another is to avoid harmful levels. It could be possible to define mandatory actions to obtain threshold values and after working to obtain quality levels with strategic action plans long standing. In this vision, there is the need for EU to define these threshold values in order to guarantee common levels of protection. The actual review process of Annex III of the END and its definition of dose-effect relationships could be the first step in this direction.

Some new topics will be faced in Italian legislation (from D to A) taking into account of new sources, new EU laws and the experience of the last twenty years. New decrees should be issued in order to regulate:

1. Wind turbine noise, as specific industrial source;
2. Capacity building of competent technicians in order to take account of principle of free market and circulation of European citizens;
3. Sport activities;
4. Passive acoustic requirements for buildings.

These decrees could represent an anticipation of topics that will be analyzed and regulated in a revised version of the END. In fact, the reviewing process of the END is starting this year and it is possible that in the new directive more aspects of environmental noise will be introduced and governed. Again, subsidiary principle should guide the subdivision of these new topics between the two levels: general principles, methods to the EU level, implementation to MS one, respecting national differences.

4. Conclusions

Member States performed different choices in implementation of the END, according to the possibilities offered by the directive. In some cases this is an opportunity to guarantee an adaptation to specific different social and cultural behavior. In other cases, resistances to accept

changes in national standard to assess noise or indicator uses to set limits limited the possibility to a uniform its implementation. Important forward steps were done for a common approach in prediction of noise exposure, but many others are necessary in less technical aspects, but more political ones.

In Italy, we are trying to have one environmental noise law, not a National and a European implemented one. We hope that this third attempt will be the winner one.

Fifteen years passed and Member States experimented the implementation of the END; indicators are well known, noise mapping and action plans interest several hundreds of municipalities and covered several hundreds of million of Europeans. It is the time to change, to go on, to try to add sources and common regulations, to pass from the description of noise to its reduction.

We learnt many lessons, now we have translated them in new ...compromises.

References

- [1] Directive 2002/49/EC of the European Parliament and of the Council of 26 June 2001 "Assessment and management of environmental noise". Official Journal of the European Communities, L189/12, 18.7.2002.
- [2] EEA Report No 10 "Noise in Europe 2014", EEA, Copenhagen, 19 December 2014.
- [3] W. Alberts "Anomalous Data of END Noise Mapping for Major Roads on the Website of the European Environment Agency", *Procedia - Social and Behavioral Sciences*, Volume 48, 2012, Pages 1284–1293. Transport Research Arena 2012.
- [4] G. Licitra, "Noise Mapping in the EU: Models and Procedures" CRC Press 2012.
- [5] G Licitra, E Ascari, "Gden an indicator for European noise maps comparison and to support action plans". *Science of the Total Environment Volumes 482–483*, 1 June 2014, Pages 411-419.
- [6] Milieu, TNO, & RPA. "Review of the Implementation of Directive 2002/49/EC on Environmental Noise". Milieu, TNO & RPA, May 2010.
- [7] 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. European Commission. Brussels, 1.6.2011, COM (2011) 321 final.
- [8] S. Kephelopoulos, M. Paviotti, F. Anfosso-Lédée, D. Van Maercke, S. Shilton, N. Jones, "Advances in the development of common noise assessment methods in Europe: The CNOSSOS-EU framework for strategic environmental noise mapping". *Science of The Total Environment Volumes 482-483*, 1 June 2014, Pages 400-410.
- [9] G. Licitra, M. Van den Berg, P. De Vos "Good practice guide on quiet areas", European Environmental Agency, EEA Technical Report n. 4/2014, June 2014.
- [10] LEGGE 30 ottobre 2014, n. 161 "Disposizioni per l'adempimento degli obblighi derivanti dall'appartenenza dell'Italia all'Unione europea - Legge europea 2013-bis. " (*Gazzetta Ufficiale Serie Generale n. 261*, 10 November 2014 - Suppl. Ordinario n. 83)
- [11] LEGGE 26 OTTOBRE 1995, N. 447 "Legge quadro sull'inquinamento acustico." (*Gazzetta Ufficiale 30 October 1995*, n. 254).
- [12] Decreto Legislativo 19 agosto 2005, n. 194 "Attuazione della direttiva 2002/49/CE relativa alla determinazione e alla gestione del rumore ambientale" (*Gazzetta Ufficiale n. 222*, 23 September 2005).