

DELIVERABLE 13

“Recommendations for policy makers”



LIFE 09 ENV/IT/102

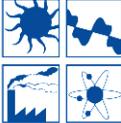
NADIA

*Noise Abatement
Demonstrative and
Innovative Actions
and information to
the public*

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NADIA is a project funded by the European Commission Directorate General "Environment" as part of the announcement Life + 2009

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1 Introduction

The project "NADIA" (Noise Abatement Demonstrative and Innovative Actions and information to the public) deals with noise management in urban areas in the framework of the EC Directive 2002/49/EC on Environmental noise (END Directive).

In particular, it concerns all the noise management process starting from noise measurement and data collection and producing noise strategic maps, noise plans, noise reduction innovative actions, monitoring, education and communication.

So, NADIA allowed project partners to have a wide and complete vision of the environmental noise remediation path.

In particular, the project objectives are:

- to demonstrate the technical and economic feasibility and the effectiveness of best practices to reduce road traffic noise levels, using noise mapping activities;
- to demonstrate the effectiveness of the involvement of the stakeholders and the correct communication to the public to increase the awareness on traffic noise emissions and their effects on health and quality of life;
- to widely disseminate the results during and at the end of the project, at local, national and European level.

The project is carried out in four Italian areas, two urban areas with more than 100.000 inhabitants (Vicenza and Prato) and two Provinces (NUTS III areas) that are in charge for the maintenance of a number of roads with more than 3.000.000 vehicles per year.

Thanks to the completeness of the shares, NADIA has allowed the partners to tackle many of the problems that other local authorities can meet and find reasonable solutions.

This concerned mainly the implementation of the remediation actions, carried out both on the noise source as on target.

These recommendations are based on such experience as well as on other similar ones NADIA cooperate with during its development: the HUSH and Quadmap projects. In particular, the HUSH recommendations are agreed and cited without reinvent them.

2 Recommendations

2.1 Legislative issues

The implementation of the Directive 2002/49/EC on Environmental noise (END Directive) in Italy by the D. Lgs. 194/2005 led to a disadvantageous and sometimes confusing overlapping of the European and Italian legislation concerning noise abatement strategies and planning. The Italian legislation concerning environmental noise before the D. Lgs. 194/2005, mainly constituted by the L.Q. 447/95, D.P.C.M. 14/11/1997, D.M. 29/11/2000 and D.P.R. 30/03/2004 n. 142. These laws define the methods to assess the impact of noise sources and to prepare the following plans for the noise abatement:

- *Piano di Risanamento Acustico Comunale (L.Q. 447/95)*: a noise plan made by the Municipalities. It defines and ranks (in order of priority) the noise abatement measures that the Municipality has to put in place to solve the noise issues caused by the sources under its charge. Even though the plan is compulsory for all the municipalities, at the end of 2010 only 62 of about 8.100 Municipalities realized it ;
- *Piano di Contenimento ed Abbattimento del rumore (D.M. 29/11/2000)*: a noise plan made by the managing authorities of road and rail network. It defines and ranks (in order of priority) the noise abatement measures that have to be carried put in place to mitigate the noise impact of the transportation network under examination. At the end of 2010 about 33% of the motorways are interested by the outcomes of this plan; RFI (the owner of the Italian rail network) completed the realization of the plan of the whole rail network;
- *Relazione sullo stato acustico del Comune (L.Q. 447/95)*: a report that should be done by the 149 Municipalities having a population of almost 50.000 inhabitants every two years about the noise exposure of the population. At the end of 2011, only 22 Municipalities produced the report ;
- *Piano Regionale Triennale di intervento per la bonifica dell'inquinamento acustico (L.Q.447/95)*: a noise plan made by each Italian Region which contents and outcomes should be taken into account by each Municipality belonging to the Region that defines the plan. This plan is poorly applied too.

In this framework of poor interest of the public administrations towards noise planning, the European legislation introduced new duties that are summed to the previous (often not respected) ones.

The D. Lgs.194/2005 states that a Noise Action Plan (in Italian language *Piano di Azione*) has to be prepared for all the agglomerations with more than 100.000 inhabitants, major roads (more than 3.000.000 vehicle per year), major railways

(more than 30 000 train passages per year) and major airport (more than 50.000 movements per year); so the managing authority which is in charge of preparing the Noise Action Plan has also to draw up all the plan requested by the Italian Legislation. This overlapping of legislation should be solved because:

- The procedures for preparing the plans are similar but not identical, for instance there are slight differences in the realization of noise maps: this is misleading for those in charge of realizing the plans;
- If the managing authority can draw up a unique plan, in compliance with European, national and local legislation, time and money can be saved;
- The outcomes of the plan requested by the Italian and the European Legislation are similar. For example, in both cases a ranking of priority of the noise abatement measure is prepared. Which of them has to be considered in the actual realization of the measures?

The LIFE+2008 HUSH (Harmonization of Urban noise reduction Strategies for Homogeneous action plans) Project offer an interesting point of view about the existing laws concerning noise problems in force in Italy. The project analysed the European and Italian Legislation and proposed to review, update the existing laws; the HUSH recommendations for the revision of the Italian and European Legislation are reported respectively in Annex 1 and 2.

The D13 of NADIA Project agrees with the proposal about the revision of the Legislations proposed by the HUSH project and reported in annexes 1 and 2; nevertheless other useful proposals could be given:

- A single plan (and consequently a unique procedure for noise mapping) at European, National and Local level should replace all the single plans that are now compulsory at different level. This operation will make the respect of the legislative duties for public administration easier, allowing to save time and money;
- A single noise action plan will be better understandable by citizens, allowing to increase their awareness about noise planning;
- The evaluation of noise impact in Italian noise maps should be done on building façade considering only the incident sound (as requested by the European Directive 2002/49/EC). To date, the Italian Legislation states that the noise impact have to be evaluated at 1 m from the façade without any correction. This operation could lead to an overestimation of the noise impact in buildings.
- The input data needed for noise mapping and plans should be made available by the managing authorities in a standard format. The Deliverable 1, Deliverable 2 and the Milestone 1 of NADIA project specify how the input data should be collected and organized. Furthermore the END Directive does not provide sanctions for administrations that do not give data

necessary for noise mapping and planning, so preventing the correct realization of a noise action plan: as stated by the H.U.S.H. Project, a sanction should be provided to the defaulting managing authorities.

- The European politicians should encourage the realization of a shared and detailed methodology for the realization of Noise Action Plans, along the lines of the Good Practice Guide for Strategic Noise Mapping and the Production of Associated Data on Noise Exposure provided by European Commission Working Group Assessment of Exposure to Noise (WG-AEN). The Deliverable 4 of NADIA Project is a proposal of a guideline for Noise Action Plan realization, which could be adopted at European level.

2.2 Noise policy integration

The perception of noise as a problem isn't very high among population except for critical cases.

Also for this reason, local authorities are struggling to justify large investments for the management of this problem.

From the experience gained during the project and from the cooperation with stakeholders has emerged the opportunity to improve the cooperation between noise planning and health, energy and mobility town policies. In particular, this step should result in integrated local programming that, of course, needs a regulatory framework also integrated.

This integration seems feasible, and therefore we suggest it, including noise, energy and mobility within the same plan at the local level.

Traffic reduction, speed reduction, flowing traffic, renewal of private and public vehicles (especially towards electric ones), the development of the cycling network , using windows of the new generation, dissemination of hedges and trees in urban areas, are all solutions with a positive impact on at least two of the three integrated areas.

Experiences in such direction should be encouraged and supported.

2.3 Education

Beyond all the aforementioned legislative issues concerning noise planning, it is crucial to increase the awareness of public bodies in charge and mainly citizens about environmental noise issues. During the NADIA project several public meetings were organized to show the results of the project and the outcomes of the Noise Action Plans of the involved authorities and, despite of an important promotion of the events, the audience was often very limited. This shows the poor attention that these issues have for the population.

So a first recommendation is to increase the public participation in noise planning in all stages not only organising public meetings to illustrate the results of the plan,

but also organising meetings with local stakeholders, such as local committees or focus groups, that can put together their experience, expectations, suggestions and remarks in a shared development of the noise plan.

Then the outcomes of noise plans should be easily accessible and clear for the citizens.

Acoustic technicians could support this process as well as public personnel in charge at different governance level (Regions, Provinces, Municipalities)

On the other side, the project demonstrated that young people are a very interested and responsive audience. A number of schools and classrooms were involved and lessons were held by the project partners' technical staff.

Pilot sites were visited and valorised in terms of education and technical skills development of high schools students.

So, the perception of the environmental noise as a relevant problem affecting the life quality in urban areas and citizens' health goes through the sensitisation of young people and their training.

For this reason we think that policy makers and funds managers should oblige beneficiaries to exploit project results in terms of education and training activities addressed to schools.

2.4 Technical aspects

The recommendations concerning the technical aspects in realizing Noise Action Plans are several and have been summarized in Deliverables 1 and 2 of the NADIA project. Among these, the following three aspects can be highlighted:

1. The END directive identifies particular areas of the territory as "Quiet Areas", i.e. areas to be highly protected against noise In order to encourage their use for relaxation and escape for urban frenzy; however the Directive itself does not indicate how these areas must be managed by whom. Examples of quiet areas are for instance urban parks or specific rural areas characterized by high landscape quality. NADIA Project suggests including Quiet Areas in the planning process starting from the next Noise Action Plans (or from the revision of the current plans).
2. Use of cost/benefit analysis (as the one described in Deliverable 4) in the selection and rating of noise abatement measures and comparison with previous experiences in order to optimize the obtainable acoustic improvement with the available budget.
3. When selecting a noise abatement action, the possibility of achieving multiple results with a single action has to be considered: for instance the substitution of windows allows to improve both thermal and sound insulation of the building. In this way even a limited action on a public building (school, kindergarten) can lead to remarkable advantages in several aspects.

These technical recommendations could be considered in the definition of an innovative detailed guideline for the realization of Noise Action Plan. Moreover, an upgrading of the minimum requirements for Noise Action Plan could be done taking into account these technical aspects.