



COMMISSION OF THE EUROPEAN COMMUNITIES

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**REPORT FROM THE COMMISSION  
TO THE EUROPEAN PARLIAMENT AND THE COUNCIL**

**concerning existing Community measures relating to sources of environmental noise,  
pursuant to article 10.1 of Directive 2002/49/EC relating to the assessment and  
management of environmental noise**

## 1. INTRODUCTION

Environmental noise from transport, industrial and recreational activities is an important local environmental problem in Europe, and the source of an increasing number of complaints from the public.

The Sixth Community Environmental Action Programme<sup>1</sup> sets the objective of ‘*substantially reducing the number of people regularly affected by long-term average levels of noise, in particular from traffic which, according to scientific studies, cause detrimental effects on human health, and preparing the next steps in the work with the (environmental) noise directive*’. Two types of action are planned to that end:

- (1) *‘supplementing and further improving measures, including type-approval procedures, on noise emissions from services and products: from railway vehicles, aircraft and stationary machinery, and in particular from motor vehicles, including measures to reduce noise from the interaction between tyre and road surface that do not compromise road safety’;*
- (2) *‘developing and implementing instruments to mitigate traffic noise where appropriate, for example by means of transport demand reduction, shifts to less noisy modes of transport, the promotion of technical measures and of sustainable transport planning’.*

Furthermore, Directive 2002/49/EC<sup>2</sup> aims to define a common approach intended to avoid, prevent or reduce on a prioritised basis the harmful effects, including annoyance, due to exposure to environmental noise. The directive also aims to provide a basis for developing Community measures to reduce noise emitted by the major sources, in particular road and rail vehicles and infrastructures, aircraft, outdoor and industrial equipment and mobile machinery.

This report provides the European Parliament and the Council with a review of existing Community legislation relating to sources of environmental noise, pursuant to article 10.1 of Directive 2002/49/EC.

## 2. FRAMEWORK FOR COMMUNITY MEASURES ON NOISE

Noise policy is a shared responsibility between the Community and the Member States. The local nature of noise problems does not mean that all action is best taken at local level, as sources of noise are not always of local origin. However, effective action is very dependent on strong local and national policies and these need to be more closely related to measures decided at Community level. There is therefore scope for better cooperation throughout the Community to improve the availability and comparability of data on information relating to exposure to environmental noise. There is also scope for the Community to help Member States share noise abatement experiences.

This integrated approach to noise management, which is in line with the objectives of the environmental noise Directive 2002/49/EC, will be instrumental in the development of

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<sup>1</sup> Decision n°1600/2002/EC of the European Parliament and of the Council of 22 July 2002 laying down the Sixth Community Environmental Action Programme, OJ L 242, 10.9.2002

<sup>2</sup> Directive 2002/49/EC of the European Parliament and of the Council of 25 June 2002 relating to the assessment and management of environmental noise, OJ L 189, 18.7.2002

existing Community measures relating to sources of environmental noise. These measures, described in details in part 3 of this report, are listed in the table below, together with the relevant provisions of the Treaty establishing the European Community:

<b>Provision of the Treaty establishing the European Community</b>	<b>Scope</b>
Article 80 (Common transport policy)	Aircraft noise (see 3.4)
Article 95 (Internal market - Approximation of the laws of Member States):	Road vehicles (see 3.2.1 and 3.2.2) Tyres (see 3.2.3) Outdoor equipment and tractors (see 3.6.1) Recreational craft (see 3.6.2)
Article 156 (Trans-European networks)	Railway interoperability (see 3.3)
Article 175 (Environment)	Environmental assessment (3.1.1) Assessment and management of environmental noise (see 3.1.2) Integrated Pollution Prevention and Control (see 3.5)

Furthermore, research and development constitute an essential building block in the development of the Community noise measures described in this report. To support the further development of the European noise policy, the Commission launched the “CALM”<sup>3</sup> thematic network under the Fifth Framework Programme for Research. The aim of this network is to identify links and gaps between current noise abatement technologies and future European legislation and noise reduction goals for air traffic, road and rail transport, marine technologies and outdoor equipment. In addition, the CALM network database<sup>4</sup> provides detailed information on the research projects currently going on or recently carried out in Europe in the field of noise. Projects supported under the Fifth and the Sixth Research Framework Programmes develop methodologies and tools for the reduction of noise at the source, the impact assessment of noise exposure of populations, the assessment of environmental noise and the calculation of the related external costs of transport.

<sup>3</sup> Community Noise Research Strategy Plan, <http://www.calm-network.com/>

<sup>4</sup> [http://www.calm-network.com/index\\_database.htm](http://www.calm-network.com/index_database.htm)

### 3. DESCRIPTION OF RELEVANT INSTRUMENTS

#### 3.1. Noise in the vicinity of transport infrastructures and in agglomerations

##### 3.1.1. Environmental assessment

Environmental assessment is a procedure to ensure that the environmental implications of decisions, including noise pollution where appropriate, are taken into account before the decisions are made. Two types of procedure are provided for in Community legislation:

- Strategic Environmental Assessment: the purpose of the Strategic Environmental Assessment (SEA) Directive 2001/42/EC<sup>5</sup> is to ensure that the environmental consequences of certain plans and programmes are identified and assessed during their preparation and before their adoption. To that end, environmental assessments must be carried out, in which the likely significant effects on the environment of implementing the plans or programmes under consideration, and reasonable alternatives taking into account the objectives and the geographical scope of these plans or programmes, are identified, described and evaluated. While noise pollution is not explicitly referred to in the SEA Directive, the 'likely significant effects on the environment' to be addressed include effects on 'human health'. The public and environmental authorities must be consulted and the results of this consultation must be integrated and taken into account in the course of the planning procedure. After the adoption of the plan or programme, the public must be informed of the decision and the environmental and other factors which were taken into account. Implementation of the SEA Directive, which has to be transposed by Member States no later than 21 July 2004, will lead to more transparent planning by involving the public and by better integrating environmental considerations.
- Environmental Impact Assessment: Directive 85/337/EEC<sup>6</sup> on the assessment of the effects of certain public and private projects on the environment (Environmental Impact Assessment - EIA) was introduced in 1985 and amended in 1997. The EIA procedure ensures that environmental consequences of certain projects, including noise, must be identified and assessed before authorisation is given. The procedure also requires effective public consultation, the results of which must be taken into account in the project authorisation procedure. The EIA directive specifies the types of project subject to an EIA (including road, rail and air transport infrastructures and certain industrial facilities), the procedure to be followed, and the content of the assessment. Five years after signing the Aarhus Convention on 25 June 1998, the Community adopted in May 2003 Directive 2003/35/EC<sup>7</sup> which included amendment to the EIA Directive. This Directive of 2003 is designed to align existing Community legislative provisions on public participation with the Aarhus Convention's provisions on public participation in decision-making and access to justice in environmental matters.

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<sup>5</sup> Directive 2001/42/EC of the European Parliament and of the Council of 27 June 2001 on the assessment of the effects of certain plans and programmes on the environment, OJ L 197, 21.7.2001

<sup>6</sup> Council Directive 85/337/EEC on the assessment of the effects of certain public and private projects on the environment, OJ L 175, 5.7.1985, as amended by Council Directive 97/11/EC of 3 March 1997, OJ L 73, 14.3.1997

<sup>7</sup> Directive 2003/35/EC of the European Parliament and of the Council of 26 May 2003 providing for public participation in respect of the drawing up of certain plans and programmes relating to the environment and amending with regard to public participation and access to justice Council Directives 85/337/EEC and 96/61/EC, OJ L 156, 25.6.2003

### 3.1.2. *Assessment and management of environmental noise*

On 25 June 2002 the European Parliament and Council adopted Directive 2002/49/EC relating to the assessment and management of environmental noise. The aim of this directive is to provide a common approach intended to avoid, prevent or reduce on a prioritised basis the harmful effects, including annoyance, due to exposure to environmental noise. To that end, the directive requires the following actions to be implemented progressively:

- Monitoring the environmental problem: the competent authorities in Member States are required to produce strategic noise maps for major roads, railways, airports and agglomerations, using harmonised noise indicators, namely  $L_{den}$  (day-evening-night level) and  $L_{night}$  (night level). The use of dose-effect relations will make it possible to assess the effects of noise on the population of Europe, as the strategic noise maps will show the numbers of people exposed to noise.
- Informing and consulting the public: the competent authorities are required to ensure that the public is kept informed and can participate in the assessment and management of noise, in line with the principles of the Aarhus Convention on access to information and public participation in decision-making.
- Producing local noise action plans: the competent authorities are required to draw up and publish noise action plans to reduce noise where necessary and maintain environmental noise quality where it is good. There must be close public participation and consultation when drawing up noise action plans. The actual content is left to the discretion of the competent authorities, as the Directive lays down only minimum requirements for the plans.

The Directive entered into force on 18 July 2002 and has to be transposed into national legislation by the Member States no later than 18 July 2004. The first maps have to be produced by 2007, and the first action plans by 2008.

In 2009, the European Commission has to submit to the European Parliament and the Council a report on the implementation of Directive 2002/49/EC, assessing in particular the need for further Community actions on environmental noise. In this respect, the Directive will provide a basis for developing Community measures to reduce the noise emitted by the major sources of environmental noise.

## 3.2. **Road traffic noise**

### 3.2.1. *Noise from motor vehicles with at least four wheels*

Road traffic is a major contributor to environmental noise particularly in urban areas. The first European harmonised noise requirements for road vehicles were introduced in 1970 by Directive 70/157/EEC<sup>8</sup> relating to the permissible sound level and the exhaust system of four wheel motor vehicles. This directive has since been amended several times in order to review and tighten the type-approval noise limits as part of the European motor vehicle type-approval framework. In parallel, efforts are ongoing to ensure that the test method used to grant type-

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<sup>8</sup> Council Directive 70/157/EEC of 6 February 1970 on the approximation of the laws of the Member States relating to the permissible sound level and the exhaust system of motor vehicles, OJ L 42, 23.2.1970 as subsequently amended, in particular by Council Directive 92/97/EEC of 10 November 1992, OJ L 371, 19.12.1992

approval sufficiently reflects noise emission conditions in real traffic. The limits currently in force are provided in the table below:

<b>Type of motor vehicle</b>	<b>Limit value (dB(A))</b>
Vehicles intended for the carriage of passengers and comprising not more than nine seats including the driver's seat	74
Vehicles intended for the carriage of passengers and equipped with more than nine seats including the driver's seat, having a maximum permissible mass of more than 3,5 tons and: <ul style="list-style-type: none"> <li data-bbox="175 667 1273 719">- with an engine power of less than 150 kW</li> <li data-bbox="175 730 1273 781">- with an engine power of not less than 150 kW</li> </ul>	78 80
Vehicles intended for the carriage of passengers and equipped with more than nine seats including the driver's seat, and vehicles intended for the carriage of goods: <ul style="list-style-type: none"> <li data-bbox="175 909 1273 960">- with a maximum permissible mass not exceeding two tons</li> <li data-bbox="175 972 1273 1023">- with a maximum permissible mass exceeding two tons but not exceeding 3.5 tons</li> </ul>	76 77
Vehicles intended for the carriage of goods and having a maximum permissible mass exceeding 3.5 tons: <ul style="list-style-type: none"> <li data-bbox="175 1151 1273 1202">- with an engine power of less than 75 kW</li> <li data-bbox="175 1214 1273 1265">- with an engine power of not less than 75 kW but less than 150 kW</li> <li data-bbox="175 1276 1273 1328">- with an engine power of not less than 150 kW</li> </ul>	77 78 80

At the international level, the World Forum for Harmonisation of Vehicle Regulations within the United Nations Economic Commission for Europe (UN/ECE) has developed regulation N°51<sup>9</sup> on road vehicles sound emissions, which is deemed to be equivalent to Directive 70/157/EEC. The relevant Working Party on Noise is currently working on an amendment to this regulation through a modification of the test procedure, with a view to better reproducing the sound levels generated by vehicles during normal driving in urban traffic.

While type-approval noise limits have been tightened over the years (by a reduction of more than 10 decibels for certain vehicles), no improvement has been made regarding overall exposure to noise generated by road vehicles, due largely to a significant increase in road traffic. In fact, the introduction and regular tightening of these limits allowed for a harmonisation of the road vehicle fleet regarding noise emission characteristics, but did not prove to be a strong technical drive towards quieter vehicles, particularly in the case of delivery vans and trucks. Efforts should therefore be pursued in the future to assess the

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<sup>9</sup> UNECE Regulation No. 51 on uniform provisions concerning the approval of motor vehicles having at least four wheels with regard to their noise emissions

possibility of introducing tighter limits ensuring that quieter vehicles are actually being put on the market and recommending ways of removing noisier vehicles from the existing fleets.

Finally, on 23 July 2003, the Commission adopted a proposal for a directive<sup>10</sup> amending Directive 1999/62/EC<sup>11</sup> on the charging of heavy goods vehicles for the use of certain infrastructures. One of the proposal's aims is to ensure that costs related to road infrastructures are better reflected in the charges paid by road users. Compared to the Directive in force, the proposed amendment would explicitly state that '*...any infrastructure costs designed to reduce nuisance related to noise...*' could be included in the cost base of tolls levied on heavy goods vehicles for the use of roads, thereby allowing the costs of abating noise from road traffic to be passed on to the users in conformity with the polluter-pays principle.

### 3.2.2. Noise from two and three wheel motor vehicles

Mopeds and motorcycles are another important contributor to road traffic noise. The disturbance generated by these vehicles is often pointed out by the European citizen and is associated with single events and peak noise levels - caused by reckless driving behaviour and/or tampering of the exhaust system (arising from a limited fraction of the overall traffic), in combination with the particular and often distinct sound character of these vehicles.

At the Community level, Directive 97/24/EC<sup>12</sup> sets permissible sound levels for two and three wheel vehicles and their exhaust systems, including replacement parts, and provides measures to counter tampering. It lays down the following type-approval noise limit values for vehicles when being placed on the market:

Type of vehicle	Limit value (dB(A))
Two-wheel motor vehicles – mopeds (speed)	
≤ 25 km/h	66
> 25 km/h	71
Three-wheel mopeds	76
Motor cycles (engine capacity)	
≤ 80 cm <sup>3</sup>	75
> 80 cm <sup>3</sup> , ≤ 175 cm <sup>3</sup>	77
> 175 cm <sup>3</sup>	80
Three-wheel motor cycles	80

<sup>10</sup> COM(2003)448 final

<sup>11</sup> Directive 1999/62/EC of the European Parliament and of the Council of 17 June 1999 on the charging of heavy goods vehicles for the use of certain infrastructures, OJ L 187, 20.7.1999

<sup>12</sup> Directive 97/24/EC of the European Parliament and of the Council of 17 June 1997 on certain components and characteristics of two or three-wheel motor vehicles, OJ L 226, 18.8.1997

This Directive requires the Commission to submit to the European Parliament and the Council a proposal establishing a subsequent stage during which measures will be adopted with a view to further reducing the sound level of the vehicles concerned. This proposal must be prepared on the basis of research and an assessment of the costs and benefits deriving from the application of tighter limit values.

A first investigation was carried out in 2000 by means of a study<sup>13</sup> whose main findings indicate that a significant number of motorcycles and mopeds in service have a reduced noise performance. This is mainly due to tampering, insufficient servicing and the installation of illegal exhaust systems. The Commission is currently investigating what measures can be taken at the European level to introduce in-service control of the noise performance of motorcycles under the framework provided by Directive 96/96/EC<sup>14</sup> on roadworthiness testing for motor vehicles. At present, roadworthiness and road-side testing requirements for two and three-wheel vehicles remain the exclusive competence of Member States. In addition, the Commission is currently carrying out a study to ascertain the appropriateness of the anti-tampering measures for vehicles laid down in Directive 97/24/EC. On the basis of this study, the Commission will, if necessary, propose new legislative measures.

### 3.2.3. *Rolling noise between tyres and road surfaces*

Complementing legislation on vehicles themselves, Directive 2001/43/EC<sup>15</sup> provides for the testing and limiting of tyre rolling noise levels, and for their phased reduction. Limits differentiate between vehicle type (cars, vans and trucks) and tyre width (5 classes), and will be enforced by including tyre rolling noise tests in European Community type-approval certificate requirements, which must be met for any new tyre being placed on the European market.

With regard to future measures, Directive 2001/43/EC states in its article 3 firstly that a tyre grip test should be introduced in Directive 92/23/EEC and secondly that the Commission shall, in the light of the experience gained from the introduction of limit values for tyre noise and within 36 months after the entry into force of the directive (i.e. before 27 June 2004), submit to the European Parliament and the Council a report concerning whether and to what extent technical progress would, without compromising safety of the tyre grip, allow the introduction of tighter limit values for the rolling noise. In the meantime, the rolling resistance of the tyres should be assessed and limit values envisaged regarding this other environmental parameter which interacts in particular with the wet grip and the rolling noise characteristics. On the basis of the above mentioned report, the Commission shall within 12 months propose an amendment to existing legislation with a view to introducing provisions relating to safety, environmental and rolling resistance aspects.

The European Commission is pursuing its efforts at the UN/ECE level in order to propose the integration of the European tyre rolling noise provisions in Regulation N°51 of the 1958 Agreement of the World Forum for harmonisation of vehicles. However, the other contracting parties to Regulation N°51 are not considering the tyre as the only critical parameter, and

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<sup>13</sup> 'Noise from two-wheeled vehicles', 2000, TRL for the European Commission, Enterprise Directorate General

<sup>14</sup> Council Directive 96/96/EC of 20 December 1996 on the approximation of the laws of the Member States relating to roadworthiness tests for motor vehicles and their trailers, OJ L 46, 17.2.1997

<sup>15</sup> Directive 2001/43/EC of the European Parliament and of the Council of 27 June 2001 amending Council Directive 92/23/EEC relating to tyres for motor vehicles and their trailers and to their fitting, OJ L 211, 4.8.2001

suggest additional measures to address traffic noise, in particular regarding road surfaces and infrastructures.

### **3.3. Railway noise**

Noise is one of the most significant environmental impacts of railway transport. A number of initiatives are currently underway to address this issue so as to allow this transport mode to develop its activities in a sustainable manner.

The Commission has set up a 'Railway noise' working group in order to elaborate the technical and economic aspects of the reduction of noise emissions from rail transport systems. Its output is intended to support implementation of the Common Transport Policy, the development of EU noise policy for rail transport, and the single market in railway supplies. The recommendations of the working group are presented in a position paper<sup>16</sup> laying down options for railway noise reduction which apply to both new and existing rolling stock. The most important railway noise source identified in the document is rail freight, and it proposes two key measures: noise emission limits for interoperable vehicles, and retrofitting of existing cast-iron block braked freight wagons with composite brake blocks - which can reduce noise emissions by 8 dB(A) to 10 dB(A) (in October 2003, the UIC (International Union of Railways) gave approval to the use in international traffic of wagons equipped with 'K' type composite brake blocks). It is clear that a significant reduction in average daily noise levels will be achieved only when the majority of rail freight vehicles in operation have been retrofitted, especially in view of the long investment cycles for rail rolling stock. Procedures including financing must therefore be found to accelerate the implementation of noise reduction, through a common strategy based on shared responsibility ensuring contribution from stakeholders concerned. Any such noise reduction scheme should address the existing fleets of wagons being used in the current Member States and in the Accessing Countries. The Commission has entered into a dialogue with the industry to assess cost-effective options, including voluntary measures taken by the industry to reduce rolling stock noise.

In particular, the Commission investigates with UIC, CER (Community of European Railways), UNIFE (European rail supply industry), UIRR (International Union of combined Road-Rail transport companies) and UIP (International Union of Private Wagons) the status and options for the reduction of noise emission from the existing European rail freight wagon fleet, including a third-party assessment of the UIC/UIP/CER Action Programme for Noise Reduction in Freight Traffic. This 'Implementation Study' describes the European wagon fleet, assesses the technical options for retrofitting, and outlines and analyses various funding options. It is expected to be finalised in early 2004.

With regard to interoperable rail systems, European legislation addresses railway noise at source through directives on railway interoperability for high-speed rail (Council Directive 96/48/EC<sup>17</sup>) and conventional rail (Directive 2001/16/EC<sup>18</sup>), which provide a legislative framework for technical and operational harmonisation of the rail network. Under this legislation, Technical Specifications for Interoperability (TSIs) are established by the

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<sup>16</sup> Position paper of EC working group 6 'Railway noise' on European strategies and priorities for railway noise abatement, [http://www.europa.eu.int/comm/environment/noise/railway\\_noise\\_en.pdf](http://www.europa.eu.int/comm/environment/noise/railway_noise_en.pdf)

<sup>17</sup> Council Directive 96/48/EC of 23 July 1996 on the interoperability of the trans-European high-speed rail system, OJ L 235, 17.9.1996

<sup>18</sup> Directive 2001/16/EC of the European Parliament and of the Council of 19 March 2001 on the interoperability of the trans-European conventional rail system OJ L 110, 20.4.2001

Commission through a comitology procedure, with the assistance of the AEIF<sup>19</sup>. In 2002, the Commission tabled a proposal for a Regulation<sup>20</sup> establishing a European Railway Agency that would be responsible for safety and interoperability, including the elaboration of TSIs.

With respect to high-speed rail, two noise-relevant TSIs were adopted in 2002 (see below), and the AEIF was given a mandate to prepare a set of revised TSIs with a view to adoption by the Commission in 2004.

TSI on high-speed rolling stock<sup>21</sup>:

This TSI sets out noise emission limits for high-speed trains (see table below). These limits are based on a low noise test track, specifically defined by introducing lower rail roughness levels than specified in the prEN ISO 3095 measurement standard, so as to allow for measurement of the rolling stock noise level itself.

<b>V (km/h)</b>	<b>Noise level (dB(A))</b>
250	87 ± 1
300	91 ± 1
320	92 ± 1

The TSI allows the less stringent limit values referred to in the table below to apply for a transitional period of 24 months starting from the date of entry into force of the TSI, in the case of:

- options to purchase additional vehicles in contracts already signed at the date of entry into force of the TSI, or
- rolling stock being contracted during the transitional period based on existing design platforms.

<b>V (km/h)</b>	<b>Noise level (dB(A))</b>
250	90
300	93
320	94

Rolling stock already in operation and requiring a new authorisation for placing into service, or already contracted at the date of entry into force of the TSI, shall be allowed to run within the maximum limit values mentioned above.

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<sup>19</sup> European Association for Railway Interoperability, <http://www.aeif.org/>

<sup>20</sup> Proposal for a Regulation of the European Parliament and of the Council establishing a European Railway Agency, COM/2002/23 final, OJ C 126 E, 28.5.2002

<sup>21</sup> Commission decision 2002/735/EC of 30 May 2002 concerning the technical specification for interoperability relating to the rolling stock subsystem of the trans-European high-speed rail system referred to in Article 6(1) of Directive 96/48/EC, OJ L 245, 12.9.2002

Finally, the TSI recommends that in the case of rolling stock ordered after 1 January 2005 or put into service after 1 January 2008, the mandatory limits should be applied with a reduction of 2 dB(A) at a speed of 250 km/h and 3 dB(A) at speeds of 300 km/h and 320 km/h. In the case of 350 km/h, a reduction of 3 dB(A) should be the objective. This recommendation will serve as a basis for revision of the mandatory limit values in the context of the ongoing TSI revision process, which will also take into account the results of the recent measurement campaign of noise emitted by high-speed rail vehicles on a reference track, co-financed by the Commission.

#### TSI on high speed railway infrastructures<sup>22</sup>:

The noise level generated by the trans-European high-speed rail system should remain acceptable for its surroundings and be kept within limits suitable to protect neighbouring populations and their activities. The environmental impact assessment study to be carried out under Directive 85/337/EEC (see 3.1.1) must show that the noise levels perceived by neighbours along new or upgraded infrastructures (either noise levels generated by interoperable trains or global equivalent noise levels of the whole traffic, depending on the applicable criteria) do not exceed the noise levels defined by national rules in application, taking into account the noise emission characteristics of the interoperable trains as defined in the high-speed rolling stock TSI.

Regarding conventional rail, draft TSIs have been prepared setting noise limits for conventional rolling stock, including freight vehicles, with a view to adoption by the Commission in 2004. There are still technical discussions on certain noise aspects, including provisions on renewed or upgraded systems, technical specifications for tracks, the monitoring of sound emission characteristics (of tracks and vehicles) and provisions on infrastructures. As a first step prior to the adoption of these TSIs, the Commission plans to adopt a decision laying down the ‘*essential requirements*’ referred to in Directive 2001/16/EC for interoperable conventional trains, which will include noise-related provisions.

Finally, Directive 2001/14/EC<sup>23</sup> lays down the principles and procedures to be applied to the setting and levying of railway infrastructure charges and the allocation of railway infrastructure capacity. One of these principles is that infrastructure charges may be modified to take account of the cost of the environmental impact of train operations, including noise. Any such modification must be differentiated according to the magnitude of the effect caused.

### **3.4. Aircraft noise**

In 1992, in order to cut down the level of nuisance from air transport, the European Community adopted Directive 92/14/EEC<sup>24</sup>, based on standards of the International Civil Aviation Organisation (ICAO), to ban the noisiest aircraft from European airports. These aircraft - defined in Chapter 2 of Annex 16 to the Convention on International Civil Aviation

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<sup>22</sup> Commission decision 2002/732/EC of 30 May 2002 concerning the technical specification for interoperability relating to the infrastructure subsystem of the trans-European high-speed rail system referred to in Article 6(1) of Council Directive 96/48/EC, OJ L 245, 12.9.2002

<sup>23</sup> Directive 2001/14/EC of the European Parliament and of the Council of 26 February 2001 on the allocation of railway infrastructure capacity and the levying of charges for the use of railway infrastructure and safety certification, OJ L 75, 15.3.2001

<sup>24</sup> Council Directive 92/14/EEC of 2 March 1992 on the limitation of the operation of aeroplanes covered by Part II, Chapter 2, Volume 1 of Annex 16 to the Convention on International Civil Aviation, second edition (1988), OJ L 76, 23.3.1992, as amended by Council Directive 98/20/EC of 30 March 1998, O.J. L 107, 7.4.1998

("Chicago Convention") - were no longer allowed to operate in the European Union after April 2002.

In March 1998 the Commission proposed a new Directive aimed at limiting the operation in the European Union of Chapter 2 aircraft fitted with "hushkits"<sup>25</sup>. The ensuing Regulation was repealed on 28 March 2002 following the adoption of a new Directive (2002/30/EC<sup>26</sup>, see below) which enshrined the ICAO Resolution A33-7 on the use of a '*balanced approach*' to noise management around airports. This approach comprises four principal elements: reduction of aircraft noise at source, land-use planning and management measures, noise abatement operational procedures and operating restrictions.

Furthermore, in September 2001, the ICAO Council adopted a new noise certification standard, namely 'Chapter 4' in Annex 16, Volume 1 of the Chicago Convention, that will be in force from 2006 for newly designed aircraft.

Since most of the current production aeroplanes are already compliant with the Chapter 4 standard, this will not be sufficient to improve the noise situation around airports because the phase out of Chapter 2 aeroplanes has been completed. To safeguard the environmental protection after 2002 in a way which is compatible with internal market requirements, the European Parliament and Council adopted Directive 2002/30/EC on the establishment of rules and procedures with respect to the introduction of noise related operating restrictions at Community airports. This directive implements the '*balanced approach*' to noise management in European Community legislation.

The Directive aims to safeguard environmental protection around airports in a way that is compatible with internal market requirements. The new Directive has put in place a harmonised definition of marginally compliant aeroplanes (aeroplanes that have a cumulative margin of no more than 5 decibels in relation to Chapter 3 certification limits).

In addition, the Directive contains principles and rules on how to carry out a noise assessment process, which is mandatory prior to the introduction of noise related operating restrictions. '*Operating restrictions*' mean noise related actions that limit or reduce access of civil subsonic jet aeroplanes to an airport. They include operating restrictions aiming to withdraw marginally compliant aircraft from operations at specific airports, as well as operating restrictions of a partial nature, affecting the operation of civil subsonic aeroplanes according to time period (e.g. night-ban).

With a view to ensuring an effective improvement of the aircraft noise situation at airports across the Community, the Commission is required no later than 28 March 2007 to submit to the European Parliament and to the Council a report on the implementation of this Directive. This report, accompanied where necessary by appropriate legislative proposals for a revision, shall contain an assessment of the effectiveness of this Directive, in particular the need to revise the definition of marginally compliant aircraft in favour of a more stringent requirement.

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<sup>25</sup> Muffler devices fitted to engines to make them less noisy. These devices enable these aircraft to meet the stricter standards for 'Chapter 3', but by such a small margin that the overall effect on aircraft noise is reduced and that such aircraft are noisier than aircraft originally certificated to Chapter 3 standards

<sup>26</sup> Directive 2002/30/EC of the European Parliament and of the Council of 26 March 2002 on the establishment of rules and procedures with regard to the introduction of noise-related operating restrictions at Community airports, OJ L 85, 28.3.2002

In that context, the Commission has launched a series of studies aimed at assessing the current noise exposure situation at Community airports and the possibilities for an harmonised approach towards establishing noise limits at Community airports including an analysis of the their environmental and socio-economic impacts. Another study is addressing the particular issue of the economic benefits of night flights with a view to provide guidance to Member States and airports envisaging the introduction of night flight restrictions. To ensure transparency and wide discussion of these issues, it has also been decided to set up a working group on airport noise.

Finally, in order to avoid a proliferation of incompatible noise charging schemes and to enhance transparency, fairness and predictability of the noise component in airport charges, the Commission tabled a proposal for a directive<sup>27</sup> on the establishment of a Community framework for noise classification of civil subsonic aircraft for the purpose of calculating noise charges. The proposed directive aims to give incentives for the use of less noisy airplanes, by modulating noise charges on the basis of the certificated noise characteristics of the aircraft.

### **3.5. Industrial noise**

Noise is one of the environmental issues that Member States' authorities must consider when issuing permits to operators of the large industrial and agricultural installations covered by the Integrated Pollution Prevention and Control (IPPC) Directive 96/61/EC<sup>28</sup>. This Directive is fully applicable to new installations, and to existing installations that are to undergo a substantial change. All existing installations covered by the Directive have to comply with permit conditions based on the use of best available techniques (BAT) by October 2007. In its Communication '*On the road to sustainable production*'<sup>29</sup> adopted in June 2003, the Commission expressed the concern that not all Member States and Acceding Countries would be able to meet this deadline, and highlighted a number of implementation problems. It also launched a stakeholder consultation on the development of the EU policy on industrial pollution.

In order to help Member States in their implementation of the IPPC directive, the Commission is organising an exchange of information on best available techniques and on the monitoring of emissions. This exercise involves experts representing Member States, Acceding Countries, industries and other stakeholders. As a result, BAT reference documents, which must be taken into account by the authorities when determining permit conditions, are being produced to cover the various activities and types of pollution covered by the IPPC directive. So far 16 out of 33 documents have been completed, most of them covering a specific sector. Noise issues are dealt with in these documents, although in most cases no general conclusions are drawn as regards BAT for noise prevention and control. This is due to the fact that industrial noise is a local environmental issue, and the measures to be taken at a specific installation depend on its location.

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<sup>27</sup> COM(2001)74, OJ C 103 E, 30.4.2002

<sup>28</sup> Council Directive 96/61/EC of 24 September 1996 concerning integrated pollution prevention and control, OJ L 257, 10.10.1996

<sup>29</sup> COM(2003)354

### **3.6. Other sources of environmental noise**

#### *3.6.1. Equipment for use outdoors and tractors*

Noise from outdoor equipment affecting health and associated well-being is mainly perceived by citizens at the local level. In the past, Community measures to reduce noise from these equipment consisted of directives laying down requirements relating to permissible noise levels, noise level marking affixed on the equipment and noise measurement standards. This approach has resulted in the adoption of seven directives covering noise from various types of equipments.

With a view to simplifying all this legislation and covering a wider range of equipment, on 8 May 2000 the European Parliament and Council adopted Directive 2000/14/EC<sup>30</sup> which lays down noise provisions on noise from 57 types of outdoor equipment, including the equipment already covered by existing legislation (which is repealed by the new Directive). It aims to smooth the functioning of the internal market and to improve the health and well-being of EU citizens by reducing the noise emitted by outdoor equipment. It sets out four types of action to achieve this: harmonisation of noise emission limits and standards, harmonisation of conformity assessment procedures, harmonisation of noise level marking, and compilation of data on noise emissions.

Some of the equipments covered by the Directive are subject to noise emission limits. These limits apply in two stages, to give manufacturers time to adapt to the new regulations. The emission limits for Stage 1 took effect on 3 January 2002 and more stringent limits (Stage 2) will enter into force on 3 January 2006, except for lawnmowers for which entry into force of Stage 2 will be subject to a further assessment in a report from the Commission to the European Parliament and the Council.

Labelling is compulsory for all the types of equipments covered by the Directive. The CE marking must be visibly, legibly and indelibly affixed to each item of equipment, together with the guaranteed sound power level expressed in dB(A).

In addition, the Directive allows Member States to take measures to regulate the use of equipment in sensitive areas by restricting the hours during which the equipment may be used.

In January 2005, the Commission will submit to the European Parliament and Council a report on implementation of the Directive. The report will include a review of the noise data collected on the basis of the declarations of conformity, and a statement on the need for and the feasibility of a revision of the scope of the Directive and the limit values.

Finally, regarding the environmental noise provisions of the type-approval regime for wheeled agricultural and forestry tractors, Directive 74/151/EEC<sup>31</sup> sets limits for permissible sound levels when these equipments are placed on the market.

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<sup>30</sup> Directive 2000/14/EC of the European Parliament and of the Council of 8 May 2000 on the approximation of the laws of the Member States relating to the noise emission in the environment by equipment for use outdoors, OJ L 162, 3.7.2000

<sup>31</sup> Council Directive 74/151/EEC of 4 March 1974 on the approximation of the laws of the Member States relating to certain parts and characteristics of wheeled agricultural or forestry tractors, OJ L 84, 28.3.1974

### 3.6.2. *Recreational craft*

Over 95% of the 800,000 recreational craft produced each year world-wide are motorboats. These boats are frequently used in recreational areas in coastal zones and in lakes, where low ambient noise is an important but scarce natural resource. Furthermore, the use of these boats is largely concentrated during the summer period, leading to noise induced annoyance and high levels of local air and water pollution caused by their exhaust gases.

Directive 2003/44/EC<sup>32</sup>, which amends the previous recreational craft Directive 94/25/EC<sup>33</sup>, extends its scope to include personal watercraft and complements its design and construction requirements with environmental standards regarding exhaust and noise emission limit values for recreational craft. These harmonised emission limits will take effect progressively, from 1 January 2005 to 1 January 2007. The Directive will contribute to maintaining and enhancing the competitiveness of the European recreational marine industries by further removing possible technical barriers to trade, whilst at the same time ensuring that the environment and human health and safety remain adequately protected.

The new Directive also requires the Commission to study the possibilities of further improving the environmental characteristics of recreational craft engines. The Commission will submit a report on its findings by the end of 2006, and if appropriate, submit legislative proposals to the European Parliament and the Council by the end of 2007.

## 4. CONCLUSION

As outlined in the present report, environmental noise is addressed at the Community level through a wide range of instruments including provisions on harmonisation of noise assessment and management, on environmental assessment, market access requirements for certain vehicles and equipments, railway interoperability specifications and rules on operating restrictions at airports. Furthermore, research and development constitute an essential building block in the development of Community measures relating to noise.

The Commission endeavours to develop these measures in order to further improve the noise exposure situation in Europe, on the understanding that legislative proposals on sources of noise should be made on the basis of robust evidence supporting such proposals. This is in line with the 'knowledge based approach' for policy making as laid down in the Sixth Environment Action Programme.

Therefore, as stated in the past<sup>34</sup> and in accordance with the Treaty establishing the European Community, the Commission will regularly assess the need for making new legislative proposals on sources of noise and, where appropriate, make such proposals.

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<sup>32</sup> Directive 2003/44/EC of the European Parliament and of the Council of 16 June 2003 amending Directive 94/25/EC on the approximation of the laws, regulations and administrative provisions of the Member States relating to recreational craft, OJ L 214, 26.8.2003

<sup>33</sup> Directive 94/25/EC of the European Parliament and of the Council of 16 June 1994 on the approximation of the laws, regulations and administrative provisions of the Member States relating to recreational craft, OJ L 41, 15.2.2000

<sup>34</sup> Declaration by the Commission in the Conciliation Committee on the Directive relating to the assessment and management of environmental noise, OJ L 189, 18.7.2003