



European Economic and Social Committee

TEN/130
Tunnel safety/road network

Brussels, 18 June 2003

OPINION

of the European Economic and Social Committee

on the

Proposal for a Directive of the European Parliament and of the Council on minimum safety requirements for tunnels in the Trans-European Road Network

(COM(2002) 769 final - 2002/0309 (COD))

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On 22 January 2003 the Council decided to consult the European Economic and Social Committee under Article 71(1) of the Treaty establishing the European Community, on the

Proposal for a Directive of the European Parliament and of the Council on minimum safety requirements for tunnels in the Trans-European Road Network
(COM(2002) 769 final – 2002/0309 (COD)).

The Section for Transport, Energy, Infrastructure and the Information Society, which was responsible for preparing the Committee's work on the subject, adopted its opinion on 5 June 2003. The rapporteur was **Mr Levaux**.

At its 400th plenary session, held on 18 and 19 June 2003 (meeting of 18 June), the European Economic and Social Committee adopted the following opinion, with 68 votes in favour and two abstentions.

1. Introduction – brief outline of the contents of the proposal

1.1 Background

- The Commission's White Paper of 12 September 2001 on *European transport policy for 2010: time to decide* provided for the introduction of an EU Directive on the harmonization of minimum safety standards for tunnels in order to ensure a high level of safety for the users of tunnels, particularly those which form part of the Trans-European Transport Network.
- With regard to road tunnels in particular, the recent catastrophes in the Mont Blanc and Tauern Tunnels in 1999 and in the Gotthard Tunnel in 2001 have raised the collective awareness of the importance of this subject. In this context, political decisions have been taken on the basis of work recently carried out at international or European level or in particular EU states, such as Italy and France, and in Switzerland. Attention is drawn to the fact that the proposals set out in the draft Directive go beyond the recommendations of the Economic Commission for Europe of the United Nations (UN-ECE) which are currently being examined.
- The present Proposal for a Directive, which was forwarded by the Commission on 16 January 2003, applies to road tunnels longer than 500m in the Trans-European Road Network; it does cover railway tunnels, the safety requirements for which will be addressed in the railway interoperability Directives.

1.2 Aims of the Proposal

After outlining the main causes of road accidents and pointing out that after any accident the first 10 to 15 minutes are of critical importance if lives are to be saved, the Commission sets the following two aims:

- preventing critical situations from arising;
- reducing the possible consequences of accidents and fires.

1.3 Contents of the Proposal

Article 3 of the Explanatory Memorandum defines the contents of the Proposal. It deals with:

- the scope: i.e. tunnels longer than 500m which form part of the Trans-European Road network;
- organisational requirements: each state will have to appoint an Administrative Authority, backed up by an Inspection Body, to harmonise the organization of safety at national level and to clarify the different roles and responsibilities;
- technical requirements: these are set out under four headings; Infrastructure, Operation, Vehicles and Road users.

1.4 Number of tunnels falling within the scope

The Directive applies to tunnels in operation, tunnels under construction and tunnels at the design stage. The table below, taken from Article 4 of the Explanatory Memorandum, lists the TEN tunnels in the EU-15. Norway is the only other EEA state with tunnels over 500m in length (130 tunnels having a total length of 200km). Only three candidate states in the TINA network have tunnels longer than 500m (Bulgaria 4, Slovenia 5 and Slovakia 1, the total length of these tunnels amounting to 15km).

Member State	Existing TEN Tunnels > 1000m	New Ten Tunnels > 1000m (2002-2010)	Existing TEN Tunnels 500-1000m	New TEN Tunnels 500-1000m (2002-2010)	Total TEN Tunnels > 500m in 2010
Austria	33	8	19	4	64
Belgium	1	0	1	0	2
Germany	19	12	18	6	55
Denmark	1	0	2	0	3
Spain	16	3	4	2	25
Finland	0	1	0	4	5
France	18	2	13	2	35
United Kingdom	6	2	4	0	12
Greece	3	16	4	22	45
Ireland	0	1	0	0	1
Italy	83	13	144	6	246
Luxembourg	0	0	0	3	3
The Netherlands	1	3	7	0	11
Portugal	1	0	0	1	2
Sweden	0	3	0	0	3
EU total	182 tunnels	64 tunnels	216 tunnels	50 tunnels	512 tunnels
Total length	900 km	172 km	151 km	39 km	1262 km

1.5 Justification for action at Community level

The Commission justifies the Proposal for a Directive on the grounds that long tunnels can be found in all EU Member States, with the exception of Finland and Ireland, and that it is necessary to improve coordination and harmonise safety information, communications and equipment so that tunnel users will enjoy a comparable level of safety everywhere.

1.6 Assessment of the cost

The Commission estimates the total cost of the proposal at between €2.6 and €6.3 billion. The latter figure is based on the assumption that all the existing tunnels would be adapted to meet the demands which are applicable to new tunnels. The Commission states that the costs attendant on complying with the Directive would be borne by the Member States.

2. General comments

2.1 The EESC endorses and supports the action taken by the Commission. It backs the aims of the Commission and calls for their rapid implementation in order to avoid a reoccurrence of

catastrophes such as those which have occurred in recent years, and to minimize the impact in human and economic terms of any catastrophes which may occur.

2.2 Scope of the Directive

2.2.1 The EESC expresses its understanding for the decision to restrict the application of the Directive in the immediate future to tunnels over 500m in length which form part of the Trans-European Road Network. These are the tunnels for which the EU can most readily harmonise the rules. According to the argument rightly advanced by the Commission, harmonization of information, communications, equipment and forms of administration will be a decisive factor in improving the safety and protection of users.

2.2.2 This being the case, whilst the scope of the Directive should not be extended forthwith to cover all tunnels over 500m in length which do not form part of the Trans-European Road Network, it should be clearly stipulated that this is a medium-term objective.

2.2.3 The EESC calls for the Directive to stipulate that when major restoration, restructuring or maintenance work is carried out in tunnels over 500m in length which do not form part of the Trans-European Road Network, Member States will be set a deadline of 20 years for bringing these tunnels into line with the new rules set out in the Directive.

2.2.4 In the absence of such a provision, European users will soon be confronted by different rules for harmonized "European" tunnels over 500m in length, on the one hand, and "**national**" tunnels, on the other. This lack of harmonization will have a damaging effect on safety.

2.2.5 The EESC recognizes that its proposal would increase the overall cost of the measures set out in the Directive but making provision for implementation of the Directive to be spread over a period up to 2025 should facilitate the achievement of the objectives which have been set. The EESC also takes the view that, given the funding proposals which it puts forward below (see point 2.4 of this opinion), the EU will have the necessary funds to launch such a policy.

2.3 Possibility of implementing lesser measures

2.3.1 In view of the cost of refurbishing road tunnels to bring them into line with the requirements of the Directive, the Commission proposes to allow Member States "*to implement less costly measures under certain conditions where they achieve a sufficient safety level*" (point 6A in the Explanatory Memorandum).

2.3.2 The EESC fails to understand the Commission's intentions. There are two possible scenarios: either the Member States display a lack of rigour by agreeing to finance work at a higher price than what is strictly necessary to respect the terms of the Directive; or there really are measures which ensure an adequate or equivalent level of safety, whilst costing less than the measures set out in

the Directive. In the latter case, the EESC wonders why the Directive does not stipulate these measures from the outset.

2.3.3 The EESC believes that giving Member States the possibility to adopt, for financial reasons, different measures from those stipulated in the Directive will mean that a considerable amount of time will be lost in implementing the Directive because of the negotiations which are bound to take place between the Member States in question and the Commission. These derogations would be in conflict with the desire to achieve harmonization, which the Commission regards as the way of guaranteeing a clear improvement in the level of safety in road tunnels.

2.3.4 The EESC therefore calls for the removal of any possible derogations from the measures stipulated in the Directive, except in cases of technical unfeasibility which are duly demonstrated and accepted by the Commission. In such cases, the Member States concerned would have to put forward solutions providing at least an equivalent level of safety.

2.4 **Financing the costs entailed in implementing the Directive**

2.4.1 The EESC does not have the means to assess the Commission's cost estimates. It notes the summary information provided by the Commission, which states that the cost of the proposal is "*in the range of €2.6 billion to €6.3 billion*". Austria alone is reported to have allocated a budget of the order of €1.7 billion. The EESC therefore calls upon the Commission to re-examine its estimates, particularly in view of the fact that the disproportion between its upper and lower figures will encourage Member States to exploit all opportunities for derogations in order to minimize their costs; this will result in a "cut-price" implementation of the Directive.

2.4.2 As special work occasioned by difficult conditions, such as the nature of the soil, will be necessary, the EESC assumes that all existing tunnels will have to be brought into line with the requirements of the Directive, at an estimated cost of €6.3 billion, spread over a period of ten years.

2.4.3 The EESC also notes the summary nature of the Commission's estimates of the direct and indirect cost of accidents. Simply on the basis of the incomplete data provided, it is very probably that an in-depth study would demonstrate that the direct and indirect cost of accidents in road tunnels is of the order of €1 billion per year. The cost of the programme for bringing tunnels into line with the requirements of the Directive in order to eliminate accidents, or reduce their impact, is estimated at €0.63 billion per year over a period of ten years, i.e. much less than the current cost of accidents each year.

2.4.4 Under these circumstances, a number of Member States which have many tunnels over 500m in length could have difficulty in meeting the cost of bringing these tunnels into line with the requirements of the Directive. The Commission should therefore amend its proposal in order to introduce fairer financing arrangements which offer greater incentives.

2.4.5 **Fairer financing arrangements:** since the Trans-European Road Network, by its very nature, benefits all users, irrespective of their country of origin, inside or outside of the EU. It would be abnormal to oblige each Member State to meet the full cost of what represents a joint charge. This would penalize Member States which, for geographical, historical or economic reasons, have invested in the building of tunnels and thus helped to establish a high-grade European road network.

2.4.6 **Financing arrangements which offer greater incentives:** since national budgetary constraints are such that, when the time comes to take decisions, Member States which are responsible for a large number of tunnels could well postpone investments in refurbishing tunnels and bringing them up to standard.

2.4.7 It is for this reason that, in line with the proposal which it has already put forward in its opinion of 23 January 2003 on tax arrangements for diesel fuel¹, the EESC highlights the need to adopt an innovatory approach to funding by setting up a "**European Transport Infrastructure Fund**" into which income would be paid on an ongoing basis (one cent per litre of all fuel used by road vehicles, or €10 per tonne of fuel consumed, which will amount to approximately €3 billion per year from 2006). The income collected by the EU Member States would be used to provide an annual income for the proposed "European Transport Infrastructure Fund", for which there would be a special heading in the EU budget. Operating with assistance from the European Investment Bank (EIB), the proposed fund could provide assistance in the form of loan guarantees or subsidies representing 50% of the cost of the work required to bring tunnels over 500m in length into line with the requirements of the Directive².

2.5 **Status of the safety officer**

2.5.1 The Directive makes provision for the establishment of a number of bodies (Administrative Authority and Inspection Body), the roles and tasks of which are quite easy to define. The same applies to a number of other players (the Tunnel Manager and the emergency services). As regards the Safety Officer, the central figure in the arrangements for ensuring the coherence of the Directive and its proper implementation, the EESC believes that the role of this officer needs to be spelt out more precisely in order to guarantee his independence and authority.

2.5.2 The EESC thinks that, and despite the intentions expressed by the Commission, which stipulates that "*the Safety Officer ... shall be independent in all road tunnel safety-related issues ...*", the officer's status as the salaried employee of the Tunnel Manager will inevitably place him in situations which are difficult to resolve or even in situations of conflict in the event of crises or when urgent decisions need to be taken.

¹ CESE 73/2003

² In view of the considerable importance of this matter, it is proposed that an own-initiative opinion be drawn up, with the aim of carrying out an in-depth analysis of all aspects of the financing of such infrastructures.

This will be the case, for example, when the safety officer, acting in pursuance of Article 4 ("**Modifications**") of Annex II, has to "*specify restrictive operating measures, or, in urgent cases ... order the tunnel to be closed to the public*".

2.5.3 The EESC wants real assurances to be provided in respect of the independence of the Safety Officer and wants the competence of the Safety Officer to be verified. The Directive should stipulate that the Safety Officer:

- may, under no circumstances, be a salaried employee of the Tunnel Manager;
- has to be self-employed, a salaried employee of a company or a member of a public service body (such as the civil defence or the fire and rescue service), which has no links with the Tunnel Manager;
- is able to demonstrate personal competence, certified by the Administrative Authority;
- has to have insurance cover;
- will be able to refer matters directly to the Administrative Authority should serious conflicts arise with the Tunnel Manager (the Tunnel Manager will also be entitled to refer matters to the Administrative Authority);
- will have the resources necessary to carry out his work, with the cost being borne by the Tunnel Manager as specified in a contract which has been submitted to the Administrative Authority.

2.6 **Future member states and special cases**

2.6.1 The EESC expresses its surprise that the proposal does not address the consequences of applying the Directive to the candidate states, which are likely to be acceding in a few months time. In the run-up to EU enlargement, the EESC calls upon the Commission to provide, by 2005, a list of all the tunnels exceeding 500m in length in the future Member States and to stipulate, without waiting for the extension of the Directive's field of application, that all tunnels in the enlarged EU are to be brought into line with the requirements of the Directive by 2025.

2.6.2 The EESC welcomes the Commission's indication, in the Explanatory Memorandum, that it took account of studies carried out in Switzerland and that Switzerland, together with Norway, will be invited to take part in the work of the Committee set up under Article 16 of the Directive. The EESC hopes that the Commission will ultimately succeed in harmonising the minimum safety requirements for road tunnels in the EU, Switzerland and Norway.

3. Specific comments

3.1

- With regard to the objectives of the proposal (Point 2 of the Explanatory Memorandum), the EESC considers that accidents are **frequently the result of the dilapidated and obsolescent state of the network and poor maintenance.**
- The EESC calls for the inclusion of an additional provision stipulating that the safety measures will be updated, as part of an ongoing monitoring exercise, to take account straightaway of new techniques and new patterns of behaviour. By way of example, it may be assumed that, in the near future, the use of the new fuels such as LPG could become widespread. If this is the case, the Directive will have to take account of this without delay as it has been drawn up on the assumption that incidents or accidents will lead to fires, which could be followed by explosions. In the case of fuels such as LPG, depending upon the nature of the accident involved, we do not know whether the explosion precedes the fire or vice versa; this means that the scenarios with regard to prevention and the organization of emergency services will have to differ from those which have been envisaged up to now.
- As regards the second objective, the EESC hopes that not only material damage, but also **the human and economic impact** will be as limited as possible.

3.2 Scope

The EESC calls upon the Commission to amend the text so as to include the proposal which it made above, namely that the scope of the Directive should be eventually extended to include road tunnels over 500m in length which do not form part of the Trans-European Road Network; these tunnels should receive from the abovementioned "European Transport Infrastructure Fund" 50% of the funding required to bring them into line with the Directive by 2025.

3.3 Infrastructure

The EESC suggests that the Commission revise its approach by proposing that, whenever single-tube tunnels are constructed, all measures be taken to keep open the possibility of adding a second tube later, thereby transforming the tunnel into a twin-tube tunnel.

3.4 Vehicles

It would be preferable to ban, by 2010, the use of additional fuel tanks lacking safety controls, especially as a harmonised central Community rate for commercial diesel fuel will be in force by then. The EESC would point out that, in a recent Directive on the alignment of excise duties, the Commission denounced the anti-competitive practices of certain hauliers who, by virtue of having 1,500 litre fuel tanks, were able to buy fuel at rates from which other hauliers were unable to benefit.

The EESC therefore urges that the measure put forward by the Commission to be of a temporary nature and that additional fuel tanks be banned.

3.5 Drivers of heavy goods vehicles exceeding 16 tonnes

The EESC calls upon the Commission to point out in the Directive that the Member States have to ensure that drivers of heavy goods vehicles receive training. In particular, the EESC proposes that, in the context of tunnel safety requirements, all drivers of heavy goods vehicles follow a course of specific training, certified by a special entry on their driving licences. The scheme to be introduced should take account of the need to:

- standardise the level of training of drivers already working in the EU;
- train new EU drivers;
- train drivers from non-EU states.

3.6 Annex I

3.6.1 Point 1.5.2: The EESC believes that this is the moment to define the rules to be observed in the course of work of such or similar importance close to tunnels which are in operation, in order to ensure the ongoing safety of users.

3.6.2 Point 1.10: The EESC takes the view that risk analyses should be carried out in all cases, in pursuance of Article 13 of the Directive, irrespective of the nature of the tunnel; no special distinction should be made for underwater tunnels.

3.6.3 Point 1.11

- The EESC believes that it should be stipulated that lighting should continue to operate for a sufficiently long period (two hours) in the event of an incident or accident (need for independent power supply or dual system).
- The EESC believes that, in the case of Class I tunnels, it should be stipulated that fire hydrants should be fed by stored-pressure networks.
- The EESC calls for the Directive to specify the nature and capacity of the fire extinguishers to be installed.
- The EESC proposes the addition to the second sentence of the third indent:

*"The Tunnel Manager and emergency services shall be able to interrupt radio broadcasting **to broadcast** emergency messages **to tunnel users via their in-vehicle radios**".*

- Indent 5: The EESC proposes the following text:

" Secure power sources, with equipment being fed by high- and low-voltage cables (electricity, radio, telephone, etc.), which shall be protected to ensure continued operation for a period of two hours in the event of incidents or accidents, etc. ...".

3.6.4 Point 2.2: In view of the importance of the Safety Officer, the EESC calls upon the Commission to set out in a single article of the Directive – namely Article 7 – all of the provisions relating to the role of the Safety Officer, taking account of the proposals put forward by the EESC above.

3.6.5 Point 3.2: The EESC urges the Commission to specify how these checks are to be carried out. In the EESC's view, the checks should be made by the police or by customs officials rather than by the Tunnel Manager, who does not have the requisite legal authority. The EESC calls for this article to be deleted.

3.7 **Annex II**

3.7.1 **Point 2 (fifth bullet)**

The EESC proposes that the fourth indent of this bullet be amended to read as follows:

*" ... maintenance of the tunnel **and safeguard work within or in the immediate proximity of the tunnel**".*

3.7.2 The EESC trusts the Commission will specify how the safety documentation is to be updated and the intervals at which it is to be updated.

3.7.3 Finally, with regard once again to the role of the Safety Officer, the EESC requests that his power to impose restrictive operating measures, or, in urgent cases, to order the tunnel to be closed to the public, not be listed discreetly at the end of Annex II but be included in Article 7 of the Directive itself, as advocated above.

3.8 **Annex III**

3.8.1 Points 1 and 2.4: These two points contradict each other with regard to the location of fire extinguishers and telephones. The EESC favours the second, as it is logical that such equipment is best located in the safety recesses.

3.8.2 Point 2.4

- In the view of the EESC, the descriptive panel indicating the class of tunnel is not readily comprehensible to tunnel users without the knowledge to benefit in any way from this information. If this descriptive panel is retained, only the initiated will understand it.
- Three panels are to be used to indicate the presence of lay-bys. The EESC points out that these three panels are much less clear and understandable than the panel on the following page (p. 46). There is a danger of confusion as a result of the juxtaposition of a dotted line and a continuous line, which suggests a narrowing of the road or a diversion, rather than necessarily indicating the presence of a lay-by.

3.8.3 Point 1.1 stipulates that lay-bys have to be equipped with an emergency telephone and at least two fire extinguishers. This being the case, only the third panel, indicating the presence of this equipment, should be included in the Annex. The retention of the two other panels would give the impression that there could be exemptions from this obligation.

4. Conclusions

The EESC endorses the Commission's proposal for the rapid implementation of harmonized minimum safety requirements for tunnels in the Trans-European Road Network. In the EESC's view, the Commission does, however, fail to come up with any solution for helping to fund the cost of the work required to bring tunnels into line with the proposed requirements.

The EESC therefore makes a number of proposals.

4.1 Financing the work required to bring tunnels into line with the proposed requirements

In the EESC's view, leaving it up to each Member State to finance the work required to bring its tunnels into line with the proposed requirements is not fair and does not provide any incentive, bearing in mind national budgetary constraints and the concentration of tunnels in particular Member States. The EESC therefore reiterates the need for an innovative approach consisting of a **"European Transport Infrastructure Fund"**, paid for by a levy of one cent per litre on all road transport fuel consumed within the EU (see 2.4.7 above).

4.2 Scope

With a view to facilitating the harmonization of safety requirements and the observance of good behaviour by tunnel users, the EESC calls for the scope of the Directive to be extended by 2025 to cover all road tunnels over 500m in length and for the states concerned to be awarded a 50% subsidy for the work, financed by the "European Transport Infrastructure Fund" (see 2.2 above).

4.3 Abolition of derogations

In the view of the proposed establishment of the "European Transport Infrastructure Fund", under which a 50% subsidy could be provided in respect of the cost of all the necessary work, the EESC calls for the abolition of possible derogations in order to avoid an inadequate application of the safety measures.

4.4 Specific training for drivers of heavy goods vehicles exceeding 16 tonnes

In the EESC's view, if the minimum safety requirements are to be observed, tunnel users will have to be properly informed. In the case of heavy goods vehicles weighing more than 16 tonnes, the EESC believes that, because of the major potential risk which they represent, it is essential to introduce specific training for drivers. Completion of the courses in question would be certified by a special entry on driving licences (see 3.5 above).

4.5 Safety officer

The Safety Officer, who is to play a crucial role in the measures set out in the Directive, must be independent vis-à-vis the Tunnel Manager and his competence will have to be verified (see 2.5.3 above).

Brussels, 18 June 2003.

The President
of the
European Economic and Social Committee

The Secretary-General
of the
European Economic and Social Committee

Roger Briesch

Patrick Venturini