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ECONOMIC COMMISSION FOR EUROPE

INLAND TRANSPORT COMMITTEE

Ad hoc Meeting on the Implementation of
the AGR

(Nineteenth session, 6 May 2003)

**REPORT ON THE NINETEENTH SESSION OF THE AD HOC MEETING ON THE
IMPLEMENTATION OF THE EUROPEAN AGREEMENT ON MAIN
INTERNATIONAL TRAFFIC ARTERIES (AGR)**

Attendance

1. The following countries participated: France, Italy, Russian Federation and Serbia and Montenegro. The Project Manager of the European North-South Motorway (TEM) Project participated. The meeting was chaired by the secretariat. The Ad hoc Meeting expressed its concern at the low level of participation.

Adoption of the agenda

Documentation: TRANS/SC.1/AC.5/37.

2. The provisional agenda was adopted.

Status of accession to the AGR and prior amendments

3. The Ad hoc Meeting was informed that there are 33 Contracting Parties to the AGR. Draft amendments to Annex I to the AGR adopted by SC.1 at its 96th session (October 2002) were circulated to Contracting Parties by the Secretary-General on 24 February 2003 in depositary notification C.N.162.TREATIES-1.

Relevant decisions of the Working Party on Road Transport (SC.1) and the Inland Transport Committee (ITC)

Documentation: TRANS/SC.1/371; ECE/TRANS/152.

4. The Ad hoc Meeting took note of the relevant decisions of the 96th session of the Working Party on Road Transport (SC.1) (October 2002) (TRANS/SC.1/371) and of the 65th session of the Inland Transport Committee (18-20 February 2003) (ECE/TRANS/152).

Consideration of proposals for amendments to Annex I of the AGR

Documentation: TRANS/SC.1/AC.5/2003/2 ; TRANS/SC.1/AC.5/2003/3.

5. The Ad hoc Meeting considered a proposal to amend Annex I to the AGR submitted by Germany (TRANS/SC.1/AC.5/2003/2). It recommended the adoption by SC.1 of the proposal to extend the E 441 to Hof (New overall reference: E 441: Chemnitz – Plauen - Hof).

6. The Ad hoc Meeting considered a proposal to amend Annex I to the AGR submitted by Azerbaijan (TRANS/SC.1/AC.5/2003/3) (extension of the E 002 through Ordubad, Djulfa, Nakhchivan, Sadarak to the border with Turkey). The delegate of the Russian Federation pointed out that a road partially following the proposed itinerary already existed as part of the Asian Highway network. The Ad hoc Meeting requested the secretariat to contact Azerbaijan to verify the itinerary and to check that the proposal was also agreeable to Armenia and Turkey.

Consideration of proposals for amendments to Annex II to the AGR

Documentation: TRANS/AC.7/9 and Add 1; TRANS/AC.7/9/Corr.1 (French only); TRANS/SC.1/AC.5/2003/1; TRANS/SC.1/2002/6 and Add.1; TRANS/SC.1/2002/13/Rev.1.

7. The Ad hoc Meeting considered proposals related to the environment and noise reduction prepared by the secretariat (TRANS/SC.1/2002/6/Add.1) on the basis of an initial proposal made by France (TRANS/SC.1/2002/6). This work had been postponed from the eighteenth session of the Ad hoc Meeting. Comments on the secretariat document contained in a communication submitted by the Netherlands on the day of the meeting were also examined. As general principles, the Ad hoc Meeting decided that the draft went into too much technical detail and should use less constraining language. The finally agreed proposal appears in Annex 1 to the present report. Modifications to the existing text of the AGR appear in italics; modifications to TRANS/SC.1/2002/6/Add.1 appear in bold italics.

8. At its eighteenth session, the Ad hoc Meeting had examined in detail the recommendations of the Ad hoc Multidisciplinary Group of Experts on Safety in Tunnels (TRANS/AC.7/9) and had decided which of them could be incorporated into the AGR. The delegate of Italy had offered to make concrete proposals in this regard.

9. The Ad hoc Meeting considered the proposals to amend Annex II to the AGR regarding safety in tunnels transmitted by Italy (TRANS/SC.1/AC.5/2003/1) and comments on them by the Netherlands submitted in a communication on the day of the meeting. The Ad hoc Meeting agreed *inter alia* that countries should be invited to check the value 5 proposed for the maximum longitudinal gradient in tunnels in the first table in section III.2.1. The Netherlands asked for a study reservation on this point and on paragraph V.1 which it stated came within the competence of several ministries. The finally agreed proposals appear in Annex 2 to the present report. Modifications to the existing text of the AGR appear in italics; modifications to the text proposed by Italy appear in bold italics.

10. The Ad hoc Meeting discussed the ongoing development of a legally binding framework for the Asian Highway network and the potential problems *vis à vis* the AGR (TRANS/SC.1/2002/13/Rev.1). These included the question of signing on stretches of road common to the AGR and the Asian Highway and the lower technical standards required in the Asian Highway Agreement. The Ad hoc Meeting was informed that several countries where roads were part of both the AGR and Asian Highway had agreed to use the higher AGR technical standards on the stretches of road concerned. Regarding signing, it was explained that the Asian Highway draft Agreement provides conditions that can accommodate member countries' plans to use E road signs instead of double signs.

Other issues

11. The Ad hoc Meeting had no other issues to discuss under this item.

Report of the meeting

12. The report of the Ad hoc Meeting was prepared by the secretariat after the session and will be submitted for consideration and adoption by the 97th session of SC.1 (26-28 October 2003).

Annex 1

Proposed amendments to Annex II to the AGR - Environment

“Section VI. ENVIRONMENT AND LANDSCAPING

VI.1 General remarks

Roads are a tool for road-users, designed within the framework of town and country planning. They make possible the movement and transport of people and goods and offer access to work, rest and leisure areas. However, in some circumstances they can give rise to various nuisances (noise, pollution, vibrations, severance) both in and outside urban areas; these have taken on a new dimension as a consequence of a considerable increase in road traffic. Taking account of the impact of a road on the environment must therefore be considered carefully with the general aim of maximizing the positive effects on the environment and correcting the negative ones.

The concern to preserve the quality (visual and ecological) of the environment *also* means that roads must be designed to harmonize with landscapes.

It is therefore important that all administrators should acquaint themselves with the environmental features involved and should subsequently take appropriate measures to inform users of the presence of these features and the regulations protecting them, or should take steps to protect them physically.

~~*For these various reasons, an environmental impact assessment shall be carried out when new projects are prepared or existing roads upgraded. It is also recommended that this provision should be extended to include reconstruction of roads or major improvements of existing roads.*~~

VI.2 Integration of roads into the environment

When **a new project is proposed or existing roads are upgraded**, consideration should be given to the direct and indirect effects of **the** roads and traffic on:

- ?? People, fauna **and** flora, ~~the habitat, agriculture, forestry;~~
- ?? Soils, sub-soils, [...], water, air, microclimate;
- ?? Landscape, physical property and cultural heritage.

In this regard the following elements should ideally be taken into account:

Good coordination of the alignment and the longitudinal profile, in relation to the elements of the landscape, should ensure not only harmonious integration of the alignment with local topography and land use but also prevent unfavourable impact on the safety of road users.

Acoustic nuisance, vibration and air, water *and soil* pollution deriving from traffic *and from* the maintenance and exploitation of roads, should be limited as far as possible by appropriate means, in accordance with the ~~rules and~~ regulations of the countries concerned.

Whenever a new road and the works involved have a great influence on the landscape, it would be better to take care of their quality by creating a new landscape rather than trying to mask it.

VI.3 The main adverse effects of roads on the environment

The most acute problems generally arise from water and noise pollution. Water pollution may affect man and his environment, while noise directly disturbs the rhythm of his life and particularly his sleep.

VI.3.1 Water pollution

There are four types of pollution caused by roads. As conventional drainage systems can remove only a small fraction of the pollution deposited on the roadway, specific solutions need to be devised for each type of pollution.

(a) Pollution during roadworks

On the one hand, there is the erosion by rainwater of the bare soil and embankments, which carries off fine materials. To avoid this, it is important to clear and strip only the surfaces necessary for the work. The temporary installation of desilting or infiltration basins makes it possible to reduce and hold back the waste materials in the most susceptible places. On the other hand, the works vehicles leave behind traces of oil and suspended solids. ~~The same basins equipped with an oil separator can also reduce this type of pollution.~~

(b) Seasonal pollution

Seasonal pollution is caused by dissolvable and abrasive de-icing products used in winter maintenance, most of which are based on sodium chloride. This type of pollution can be reduced by salting the roads less and reducing the amount of salt used. Moreover, it is strongly advised to cover stocks in order to avoid the constant discharge of brine.

(c) Accidental pollution

Accidental pollution results from spills following road accidents involving the transport of dangerous goods. Statistics show that such accidents usually take place outside built-up areas. Hydrocarbons are the main cause of this type of pollution. Solutions to this problem involve both measures to adapt the infrastructure and operational measures. Susceptible environments can be protected by installing crash barriers or embankments or by building a watertight drainage system (ditches, desilting

~~and oil separator tanks, grassing of ditches, etc.). The operational measures concern the design of an early warning plan and action at all levels of responsibility.~~

(d) Chronic pollution

Chronic pollution describes all the forms of pollution associated with road traffic: wear of the roadway, metal corrosion, tyre wear and exhaust emissions. It should be noted that only a small proportion of the amounts emitted is carried off by rainwater to discharge points. However, a rainstorm or mini flood can drain a sizeable area and thus cause more widespread pollution. The cleansing capacities of ditches and soil should therefore be maximized. ~~by installing more outlets and creating slightly sloping grass covered ditches to allow the water to infiltrate, taking into account the cleansing qualities of the surface soil.~~

VI.3.2 Noise

Road noise is typically a combination of unpleasant and undesirable sounds caused by the passage of light and/or heavy vehicles. The noise level, measured in [A-weighted] decibels (dBA), can cause disturbances in people's daily lives and sleeping habits.

The relationship between the noise level experienced and disturbances allows us to define the thresholds above which noise-reduction measures should be taken. These thresholds, which should be set nationally or, failing that, by administrators, vary from country to country. ~~They may depend on the type of built up area through which the road passes.~~

(a) *The following factors **concerning noise** should be taken into account in **environmental impact assessments** ~~in noise estimate studies~~:*

- ?? *Information on the estimated daytime and night-time traffic and on the traffic observed at particular times, including the percentage of heavy goods vehicles;*
- ?? ***Inhabited or sensitive areas** ~~Locations of habitat and activities~~, where necessary;*
- ?? *Information on relief ~~and topography~~;*
- ?? *Nature of the project (new, existing or modified);*
- ?? *Information on the road surface;*
- ?? *Nature ~~and type~~ of buildings to be protected (measures differ for hospitals, housing and factories);*
- ?? ***Category** ~~Type~~ of road **concerned** and speed limit(s) **authorised**, etc.*

(b) *The following measures should be taken:*

- ?? *Avoid inhabited or sensitive areas (schools, hospitals);*
- ?? *Install protective devices (**noise barriers** ~~screening, embankments~~);*
- ?? *Use less noisy surfaces where possible;*
- ?? *Soundproof facades;*

?? *Take account of the existing noise pollution in planning documents.*

VI.4 **Taking account of the landscape and the cultural environment**

Such elements of the landscape ~~and the environment~~ **that** are visible from the road will contribute to traffic safety and to the comfort of road users. They should supplement and reinforce visual guidance and add to the interest of the journey.

The sight of towns, rivers, hills, etc., gives users an opportunity to take their bearings and should be conserved as far as possible.

Plantations (in alignment or other forms) may contribute to improving visual guidance and to breaking the monotony of the road alignment, provided that the conditions of their implementation do not create additional risks.

Landscaping may also contribute to protection against dazzle and against adverse weather conditions (wind, snow, etc.).

When the installation of noise barriers **is considered** ~~along roads means that the user loses a great deal of his information about the environment and has the impression of being "shut in"; such installations~~ **care should be taken in their construction** ~~therefore be constructed so as to ensure that they are integrated to the maximum into the landscape and so as to compensate users for any the information~~ **hidden** ~~lost~~.

It is desirable for the cultural heritage of the regions travelled through to be brought to the attention of users by appropriate means: signs, information centres in service areas, etc.

For **primarily** ~~aesthetic and~~ safety reasons, commercial advertising near **roads** ~~international highways~~ should be avoided.

Annex 2

Proposed amendments to Annex II to the AGR - safety in tunnels

Section III. GEOMETRIC CHARACTERISTICS

Sub-section III.2 Horizontal and vertical alignment

Paragraph III.2.1 Basic parameters

Insert in the table after “Maximum gradient (percentage not to be exceeded)”, the following new entry:

“Maximum longitudinal gradient in tunnels 5 5 5 5 5”

(Reference: measure 3.08 – partially – of the recommendations on safety in tunnels)

Sub-section III.3 Cross-section between junctions

After the existing text, add the following subparagraphs:

“In this respect, tunnels and bridges, structures which are an integral part of the road system, should, to the extent possible, have the same number of traffic lanes as there are before and after these structures.

For tunnels, the principal criteria to be taken into account in deciding on the number of tubes to build (a single tube or two tubes) are traffic forecasts and safety. A two-tube tunnel should be constructed if the road concerned has separated carriageways.

Emergency stopping places (lay-bys) should be provided at least every 1000m in long bidirectional tunnels.”

(Reference: measures 3.01 and 3.05 – partially – of the recommendations)

Section VI. MAINTENANCE

Sub-section VI.I General considerations

- *The following text should be added at the end of the second paragraph:*

“It is advisable that from the initial design and construction stages, account be taken of future maintenance activities, in order to reduce the costs and negative effects on traffic flow and safety.”

- *After the existing second subparagraph, a new subparagraph is inserted as follows:*

“The complete or partial closure of lanes in tunnels should be avoided. If maintenance work requires the closure of a lane in a tunnel, this closure should already be carried out outside the tunnel.” (Reference: measure 2.08 – partially – of the recommendations.)

Present sections V and VI should be renumbered VI and VII respectively.

The new section V should read as follows:

“V. **MANAGEMENT, SAFETY *EQUIPMENT* AND GENERAL ARRANGEMENTS FOR TUNNELS**

V.1 Traffic management systems

*Tunnels with high traffic volume should be equipped with traffic management systems in order to avoid traffic congestion, particularly in the case of **an incident**.*

*In the case of long or short-term closure of tunnels, the best possible alternative itineraries shall be planned and indicated to users at diversion locations **situated in advance of the tunnel**. (Reference: measures 2.12 and 2.13 of the recommendations)*

V.2 Control centre

For tunnels starting and ending in different countries or falling under the control of different national regions, one single control centre should be designated as being in control at any given time. (Reference: measure 2.10 of the recommendations)

V.3 Emergency exits and access for emergency services

*(...) **It is recommended to provide emergency exits at a maximum distance from each other of 500 meters. The optimal distance between emergency exits should be decided case by case based on an assessment of the risk potential. Shelters without an exit leading to escape routes to the open air should be avoided in future tunnel construction. (Reference: measure 3.2 of the recommendations.)***

*In twin tube tunnels, in the event of an **incident** in one tube, **it is recommended that the other tube be used as an escape and rescue route. To this effect, the tubes should be connected at regular intervals by cross connections for pedestrians and by cross connections allowing the passage of emergency service vehicles. (Reference: measure 3.3 of the recommendations.)***

*For twin-tube tunnels, **it is recommended where possible, to foresee a crossing of the central reserve in front of the tunnel entrance. (Reference: measure 3.4 of the recommendations.)***

V.4 (...) Tunnel equipment

The safety equipment required in tunnels should be defined on the basis of a case by case evaluation of the risk potential of the tunnel under consideration. (Reference: measure 3.08 of the recommendations.)

A list of such equipment is provided below. Some of this equipment is intended mainly for long tunnels.

In addition to the equipment already envisaged in other sections, the following additional equipment and/or devices also lead to improved safety in tunnels:

- ***Signs indicating escape routes, safety equipment (particularly extinguishers) and installations;*** (Reference: measures 3.05, 3.10 and Annex 1 of the recommendations.)
- *Emergency calling posts;* (Reference: measure 3.10 of the recommendations.)
- ***Radio installations or channel for use by fire brigades;*** (Reference: measure 3.5 of the recommendations.)
- *Systems for video surveillance and automatic detection of fires;* (Reference: measure 3.05 of the recommendations.)
- *User information systems (radio, loudspeakers, variable message signs, alarm systems, etc.);* (Reference: measures 3.05 and 1.12 of the recommendations.)
- *Traffic lights and barriers to stop vehicles when necessary;* (Reference: measure 3.05 of the recommendations.)
- *Longitudinal and smoke velocity monitoring systems;* (Reference: principle 3.1 of the recommendations.)
- *Overheating control systems for heavy goods vehicles (to be installed outside tunnels);* (Reference: measure 2.16 of the recommendations.)
- ***Road signs and/or markings in order to help drivers to maintain an adequate distance (in general, unless otherwise indicated, 20 to 50 metres) from the vehicle in front;*** (Reference: measure 1.09 of the recommendation.)
- ***Systems for detecting violations of traffic regulations particularly regarding speed limits and distance between vehicles.*** (Reference: measure 2.11 of the recommendations.)

V.5.2 Ventilation systems and fire extinguishing devices

Appropriate ventilation systems should be provided for air and for smoke control and extraction. (Reference: measure 3.05 of the recommendations.)

In twin-tube tunnels, appropriate means should be implemented to stop the propagation of smoke and gases from one tube to the other in the case of a serious incident. (Reference: measure 3.03 of the recommendations.)

Fire extinguishers should be installed at the entrance and inside tunnels at regular intervals (...). In addition, water supply for fire brigades should be provided.” (Reference: measure 3.05 of the recommendations.)
