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**ECONOMIC COMMISSION FOR EUROPE**

**INLAND TRANSPORT COMMITTEE**

Working Party on Rail Transport  
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agenda item 15)

**INFORMATION ON DEVELOPMENTS IN VARIOUS RAILWAY FIELDS**

**Addendum 1**

**Transmitted by the Governments of Belgium, Portugal and Switzerland**

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## **BELGIUM**

### **(a) Environmental questions related to railway operations:**

On 24 January 2001, the SNCB and the Brussels-Capital Region concluded an environmental convention concerning the follow-up and the management of acoustic nuisances due to rail transport.

### **(b) Safety in railway transport:**

In order to improve the monitoring of train speeds on the SNCB network, it has been decided to introduce progressively on conventional lines and others the interoperable cab signalling system known as ETCS (European Train Control System), which enables train speeds and signalling restrictions to be monitored continuously.

A working group in SCNB's Infrastructure Maintenance unit is reviewing the interactions between rail and road signals at level crossings. A specific proposal is being prepared to restrict instances of application of the DA-KBR device, the purpose of which is to ensure the free flow of rail traffic when the danger signal is operating on a level crossing following a lengthy closure and to permit running at sight.

The working group in question is also considering possibilities of cutting down on numbers of manned level crossings and reducing the situations requiring an SNCB employee to show the C3 disk signal (no crossing).

Steps have been taken by the SNCB to reinforce safety in the North-South junction tunnel.

As part of the plan to concentrate signal boxes, the SNCB is in the process of renewing old signalling installations and permanent way equipment with a view to improving safety (e.g. reintroduction of on-site operated points).

A danger level code of 1 to 4 has been defined for each railway structure. This code indicates both the stability of the structure and its safety. The code gives a better indication of the condition of the property and the work required to improve it.

A survey of zones at risk has been made in the context of protecting catenaries and combating vandalism, making it possible to identify adaptations to installations needed to improve their intrinsic safety. A note concerning "new railings for structures" is in the process of being approved.

The SNCB will also carry out a review of its emergency plans for formation yards where dangerous goods are in transit. This will be based on the recommendations of "Emergency planning guidance for rail marshalling yards." (This guide, drafted by UIC in collaboration with CER (Community of European Railways) at the request of DG TREN and DG ENV, is at the finalization stage). Kinkempois station has been designated pilot station.

The other major options and decisions taken as regards the safety of the SCNB infrastructure and its operation are as follows:

- Completion in 2001 of the “ground-train” radio network (six additional lines are being equipped, including the Louvain-Ottignies lines);
- Replacement of the “ground-train” radio network by the GSM-R system, which is much more efficient and compatible with the requirements of European railway interoperability (horizon 2006-2008);
- Continuing modernization of signal boxes;
- Improvement, renovation and draining of tracks, rail beds and switch gear;
- Installation of hot box detectors: 87 installations have been carried out, covering the entire railway network;
- Survey of rock cuttings and measures to be taken (already carried out at Bas-Oha);
- Entry into service of the new track geometry measuring coach;
- Proposed audit of the training and organization of work of train drivers so as to identify possible future improvements;
- Purchase of new driving simulators for the training of train drivers;
- Survey of crisis communication procedures.

**(b) Introduction of new transport technologies and application of modern techniques to railway operations, in particular regarding the interface between rail transport and other transport modes:**

As regards the improvement of connections between international and national transport networks on the one hand and regional and local networks on the other, the management contract between the SNCB and the State states that the transport plan must meet certain conditions, in particular: complementarity between all means of transport (bicycle, car, taxi, plane), optimum integration of transport plans as regards domestic service trains and international service trains (in particular, high-speed trains) and optimization of train/train connections. In this regard, the SNCB has given importance to the development of a number of hubs (Brussels, Antwerp and Liège (Lille)) with a frequency on those services ensuring a connection within a reasonable period of time between intercity and interregional trains on the one hand and high-speed trains on the other. For example, the Liège-Lille and Antwerp-Lille IC trains guarantee good connections with the French TGV from Lille.

The SNCB has always favoured close collaboration and coordination between rail transport and regional public transport companies (timetables, services, connections, frequency) so as to ensure the best possible service to customers. The management contract between the

State and the SNCB further provides that the SNCB must ensure the introduction of a service providing for appropriate minimum accessibility, by public transport, to and from all areas of the country served by the railway network.

Lastly, in order to reach a maximum number of customers, including those not connected to the railway network, B-CARGO has for several years now been developing a policy of rail-road complementarity, in particular through partnership agreements with hub operators and road hauliers providing accessory services such as: trans-shipment of goods, intermediate storage or cartage from the nearest station.

## **PORTUGAL**

### **(a) Environmental questions related to railway operations**

Following work by the Interministerial Commission on climate change, a Working Group on transport and the environment was established by an Order of the Ministry of Social Development on 21 January 2000; it comprises a number of bodies related to the transport sectors and one of its purposes is to help to outline a strategy in the transport sector for the deployment of the Kyoto Protocol.

In addition to this group's work, a working group on the environment was established within the railway sector in order to incorporate environmental concerns more efficiently in the various companies in the sector. The representatives of this working group act on various fronts, including:

- Follow-up of work done by the Working Group on transport and the environment;
- Development of a strategy to reduce exhaust emissions;
- Development of a joint strategy with railway companies to deal with new requirements concerning the acoustic environment;
- Development of environmental performance indicators;
- Technical follow-up of national and Community guidelines and legislation in environmental matters;
- Setting-up of an environmental assessment process for railway sector plans, programmes and projects;
- Study of measures to mitigate the adverse impacts of railway activity;
- Study of measures to promote rail transport as a transport mode to be subsidized in terms of energy.

The establishment of this sub-sector Group ensures that each company in the railway sector has representatives within its organization for the development of an environmental policy linked to railway activity. As part of the preparation of railway investment projects, it will be possible to plan to incorporate in an integrated form considerations of economic and social support and environmental aspects of land use. Measures have also been taken to mitigate impact on the environment in accordance with the respective environmental impact studies, and their technical follow-up.

Where investment activities have materialized, measures have been taken to minimize environmental impact in accordance with the relevant environmental impact studies.

A study has been made of the impact of CO<sub>2</sub> emissions of major investments in recent years in the metropolitan areas of Lisbon and Port as well as a study of the 2000-2006 investment plan, which examines the possible adaptation of high-speed lines and the reorganization of goods traffic towards Spain, in particular using the Sines-Madrid link.

## **SWITZERLAND**

### **(c) Safety in railway transport**

Switzerland has two safety systems in trains: SIGNUM (warning system) and ZUB (speed control system). These systems, however, are no longer up to date in technological terms, they are expensive to maintain and in particular they are not euro-compatible. The safety goals of the Federal Office of Transport include the introduction in the medium- and long-term of the automatic stopping system for trains, ETCS (European Train Control System) which ensures interoperability. This system will replace SIGNUM and ZUB and may be used both on conventional lines and on high-speed sections.

On 27 January 2000, the Federal Office of Transport drew up a transfer policy to identify the phases and the financing of the change-over from the SIGNUM and ZUB systems to the ETCS. Provision has been made for the following measures:

#### **In the short term: from now to the end of 2002 at latest:**

- Tracks: the transport companies are required to give priority to the sections at risk. When operating measures do not permit or when aspects of the ETCS so justify, the ZUB system needs to be installed.
- Vehicles: vehicles used regularly on sections protected by the ZUB system and vehicles carrying dangerous goods must be equipped with this system. This rule also applies to foreign vehicles used in Switzerland. All vehicles equipped or to be equipped with the ZUB must also carry a “Rucksack” system (except for vehicles where the driver’s cab is directly equipped with signals). This additional device enables the vehicle’s ZUB appliance also to receive and read ETCS signals. It prevents the communication problems which may arise between a section equipped with the ETCS and a vehicle fitted with the ZUB system when the rail network is being progressively upgraded for the ETCS.

**In the long term: from 2001 to 2010 at latest:**

- Tracks: the tracks will no longer be protected by ETCS components alone. In view of international traffic in Europe, priority will be given to the north-south transit routes via the Saint Gothard and the Lötschberg-Simplon. The Bern RER network will also receive priority treatment since it is closely linked to the Lötschberg-Simplon route.
- Vehicles: provision should already be made at the manufacturing stage for the technical conditions for installing ETCS equipment.

The Federal Office of Transport informed the Swiss Railways in March 1998 that it was counting on the euro-compatible ETCS system, which enables the automatic train-stopping system to be coordinated internationally.

Meanwhile, now that work on the technical specifications for the ETCS has been completed, there is nothing to stop its being introduced into Switzerland.

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