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Working Party on Rail Transport
(Fifty-third session, 6-8 October 1999,
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INFORMATION ON DEVELOPMENTS IN VARIOUS RAILWAY FIELDS

Addendum 1

Transmitted by the Governments of Belgium, France, Luxembourg and Switzerland and by the Committee of the Organization for Cooperation between Railways

Note: The Working Party at its fifty-second session asked Governments and international organizations to furnish the secretariat with information on developments in the following aspects before its fifty-third session (TRANS/SC.2/190, para.80):

(a) Environmental questions related to railway operations;

(b) Safety in railway transport;

Please note that the distribution of documentation for the Working Party on Rail Transport (SC.2) is no longer "restricted". Accordingly, the secretariat has adopted a new numbering system whereby all working documents other than reports and agendas will be numbered as follows: TRANS/SC.2/year/serial number. Reports, agendas, resolutions and major publications will retain their previous numbering system (e.g. TRANS/SC.2/189).

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(c) Use of computers in rail transport operations, in particular in the management of rail goods traffic;

(d) 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.

The Working Party may perhaps wish to consider the information submitted by the Governments and international organizations, reproduced below.

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BELGIUM

(a) The following activities have been carried out as part of the 1996-1999 plan of action for the environment:

Protection of the environment

Training: Specific training has been or is being taken by environmental advisers within the safety and the environment group and in the network and infrastructure maintenance commissions. In the Flemish region, companies are required to appoint an environmental coordinator for certain classified installations (e.g. major workshops, storage depots for more than 500,000 l of heating oil) who must meet stringent criteria in terms of experience and training.

Internal information and awareness campaigns have been organized on compliance with environmental obligations.

Soil

A first inventory of soil pollution was made on the basis of certain risk-related activities. This information needs to be refined using detailed data obtained from soil analyses.

The administrative and financial consequences of the new legislation in the Flemish region are considerable, particularly in cases of land transfer.

Investments are scheduled for the modernization and renovation of diesel supply points so as to avoid any pollution.

Wastes

A new circular on wastes has been drafted and will be implemented in 1999. It contains the legislation to be complied with, internal regulations, clauses on the trading in of packaging wastes and advice on eliminating waste correctly and more economically.

The entry into force of the Vlarea (order for the implementation of the wastes decree in the Flemish region) requires a further inquiry and new forms of recovery of raw materials or secondary products in the “waste” generated by infrastructure activities.

Noise and vibrations

In the implementation of the TGV project and any other project involving the adaptation of the railway network, noise is a major priority. After intensive consultation with the authorities, the necessary measures are drawn up for each project. Anti-noise barriers and other soundproof infrastructures have become part of the standard equipment when railway lines are built or modified.

The rolling stock recently brought into service (II 1 coaches and AM96 electric railcars) is noticeably more silent.

With the approval of the western branch of the LGV in April 1996 and November 1997, a large number of measures were taken to deal with noise and vibration. The results are in keeping with the requirements laid down by the environment authorities.

(b) Nothing to add.

(c) The SCNB is currently developing the SPITS project for the creation of a centralized data bank for the management of goods traffic.

(d) Goods are carried either in conventional wagons or in a combination system.

ACTS system technology is being developed but it is very expensive.

FRANCE

(c) Goods transport management makes use of computerization both in the operation of the production system (automated management of wagon-sorting and in administrative and commercial operations (SESAME system).

(d) Combined transport is developing normally, especially internationally. It uses standardized containers and swap bodies thus permitting, as a result of trans-shipment installations, an interface to exist between rail and other transport modes.

Current developments particularly involve an increase in trans-shipment capacities and the development of bimodal technologies to enable trans-shipment operations to be simplified and their cost reduced.

LUXEMBOURG

(a) The use of biodegradable lubricants has become generalized both for switch gear and in laying track for fastening sleeper screws and bolts.

The hedges and bushes along the track are mechanically cut in 50 m sections twice a year. This system guarantees the long-term continuity of the biotope and also enables the organic waste from hedge-cutting to be recycled as compost.

In the area of train traction, the increase in the share of non-polluting electric locomotives and the simultaneous reduction in diesel traction may be noted. The new dual current locomotives are also equipped with a regenerative braking system enabling the catenary to be supplied with electricity produced by the braking effort.

As regards the reduction of noise from goods traffic, the CFL will equip wagons to be kept in service after 2005 with type LL composite brake-shoe inserts. The new wagons to be purchased will automatically be equipped with inserts with a high friction coefficient K.

The improvement in public rail services and the consequent introduction of Takt98 are efficient means of reducing pollution from private road traffic.

(b) Considerable efforts were made by the CFL to improve rail safety during the past year.

The Administrative Board of the CFL at its meeting on 23 March approved the plan of action for the improvement of rail safety prepared by an external consultant. It contains 42 measures ranging from psychological assistance and personnel training to a specifically targeted adaptation of railway infrastructure and the creation of new means of blocking human errors. At the end of 1998 the situation was as follows:

11 proposed measures had been carried out;

15 measures were in the process of being carried out;

16 measures were being studied.

In order to be able to exercise material control over trains in the event of the engine-driver failing to obey signals, the CFL envisage the installation of a speed-control system. It is initially scheduled to install it on a test section between Cruchten and Diekirch. Subsequently the Luxembourg-Diekirch line will be equipped as a pilot venture.

During the transitional phase, in close collaboration with its personnel, the CFL has developed the train-control MEMOR system. The principal criterion in choosing this system was the possibility of simple and rapid implementation. Briefly, the MEMOR system is a piece of equipment that oversees the driver's compliance with distant and main fixed signals. In the event of failure to obey the signal, MEMOR emits an audible and visible signal and, if necessary, prompts emergency braking.

Lastly, mention may be made of various investments in signal installations during the period, and in particular:

the installation of 18 distant fixed repeating signals;

the resiting of eight fixed main signals or distant fixed signals to improve their visibility.

(c) A computerized tool known as “SIGMA” (computerized system for goods traffic management) has been managing freight transport and equipment on the entire CFL network and in respect of crossover through the HERMES network since 1991.

(d) As far as we know, no new features are anticipated in transport technology for the time being.

SWITZERLAND

(a) Noise

In March 1999 the Federal Council adopted a draft bill on noise reduction on the railways. This bill, the subject of an optional referendum, provides that all new installations or those that have been modified must

comply with soundproofing requirements and may not exceed the limits set by law. The rule is not, however, respected throughout the present railway network. This situation will be remedied by improvements to the network over the next 15 years.

The planned soundproofing measures will consist in improving the rolling stock (particularly by replacing cast iron brake blocks by brake blocks of synthetic material), building sound-insulating walls along the routes in question and installing soundproof windows in existing buildings. On completion of the work (2015), at least two-thirds of the population concerned will be protected by the measures taken other than in buildings. The remainder of those inadequately protected should be able to benefit from the protection of soundproofed windows.

The estimated cost of overall improvements is 1.854 billion Swiss francs, 820 million of which will go to the adaptation of the rolling stock and 750 million to soundproof walls. The cost of reducing railway noise is covered by a bill concerning the implementation and financing of public transport infrastructure projects, adopted by the Swiss people on 29 November 1998.

Waste management

The CFF have prepared a waste-management handbook informing their personnel about the procedures to follow in the purchase, use and disposal of railway equipment. In 1998 a brochure was published on alternatives to the use of herbicides. The CFF are also carrying out a research programme in this area with DB AG.

COMMITTEE OF THE ORGANIZATION FOR COOPERATION BETWEEN RAILWAYS (OSZhD)

(a) Since 1993 OSZhD has been undertaking work on the question of the protection of the environment in relation to the operation of the railways and is following closely the main events in this regard, for example, the Vienna Conference on Transport and the Environment (1997).

OSZhD's work is for the most part geared towards harmonizing standards for rail transport, taking into account experience acquired internationally.

An example of this is Note R-002 concerning recommendations on standardized environmental rules for the discharge and emission into the environment of pollutants produced by the operation of the railways, taking land classification into account.

(c) Use of computers in rail transport operations, in particular in the management of rail goods traffic.

The railways of the OSZhD countries currently use different computer systems to manage goods traffic, particularly as regards:

follow-up of wagon reception and dispatch on border sections;

follow-up of wagons during loading and unloading operations;

management and follow-up of train movements;

controlling wagon shunting with mechanized train-sorting humps;

regulation of empty wagon arrival at loading points;

counting and management of the goods wagon fleet;

calculation of tariffs for international rail services.

OSZhD also undertakes work in the following areas:

electronic technology applied to the transport of goods on international lines;

establishment of a data transmission network of the railways to organize international transport operations.

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