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**ECONOMIC COMMISSION FOR EUROPE**

INLAND TRANSPORT COMMITTEE

Working Party on Rail Transport  
(Fifty-third session, 6-8 October 1999,  
agenda item 17)

INFORMATION ON DEVELOPMENTS IN VARIOUS RAILWAY FIELDS

Transmitted by the Governments of Armenia, the Czech Republic,  
Germany, Hungary, Latvia, Lithuania, the Russian Federation, Slovakia,  
Slovenia, Spain and the United Kingdom

At its fifty-second session, the Working Party requested to those Governments and international organizations to provide information on new relevant developments in the following items:

- (a) environmental questions related to railway operations;
- (b) safety in railway transport;
- (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 information provided by Governments and international organizations is reproduced below for consideration by the Working Party.

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 (i.e. TRANS/SC.2/189).

**ARMENIA**

- (a) in wagon and locomotive depots water purification pools operate, which close heavy oils to flow down the sewer; measures concerning the transporting of chemical toxic substances, explosives and the preventing of accident have been developed;
- (b) regular measures for safety in Armenian railway transport are developing:
  - in 1998 the capital repairs were made in Airum-Vanadzor section;
  - at present 10,000 wooden sleepers have been purchased for Gumri rail section reconstruction;
  - automatic mechanisms for crossings have been reconstructed;
  - overloading of trains is forbidden, according to the standards;
  - regular supervision has been set up over the fixation of transporting goods; -
- (c) projects on coordination in railway goods traffic computers using are developing;
- (d) Gumri locomotive depot has been put into operation. To improve railway operations new mechanisms have been purchased. In Yerevan and Gumri locomotive depots wheel pairs repair has been developed.

**CZECH REPUBLIC**

**(a) Environmental issues related to railway transport operations:**

Protecting the environment is one of the priorities not only for now, but in the years to come. Accepting the rules of the EU, agreeing to improving the environment and applying it to individual departments, branches, fields and to independent activities, will be an actual and unavoidable reality in the near future. That is why the aim of the Czech Railway is toward strictly minimising the burden on the environment by railway operations, limiting ecological risks and eliminating sources that pollute the environment. We are now continuing with studies of the railway transport's influence on the environment. At the same time progress is continuing on evaluating the operations of the Ro-La system in the sections of Lovosice-Dresden and České Budějovice-Villach.

**(b) Safety in railway transport**

The Czech Railway is actively participating in a line of UIC projects that relate to the security of rail operation, particularly the EIRENE digital radio; Backbone, a digital transfer network; and ETCS, the European train security system. At present we are actively working on harmonising the functional requirements of inter-operating a safeguarding system.

c) Using computers in railway transport, especially in freight handling.

*Transport procedures:*

- CDS system (Central Dispatching System for train dispatching and analysis)
- ISOR (Information and Operational Procedure System)
- MIS (Local Informational System)

*Commercial transport:*

- VPSND (Computing Transfer System for Freight Transport for Cevis and CDZ for applying local standards - IT Cevis, APM NP)
- ISOPČ (Information System for Business Transport Activities)

*Economical System:*

- SAP R/3 - a control module has been in preparation for quite some time now
- IS PT (an information system of transport revenues which should be in operation on 1/1/2000 and whose applications will be on the local level of APM HP, part of APM NP, APM VA, and APM VNVK, and SPS and CLA programs for invoices)

d) Installing new transport technology and applying modern rail techniques, especially to link the railway with other types of transport.

In passenger transport the primary necessity is to create a new integral system for urban and suburban passenger travel, as well as a broader system for transport intervals that can be set up on individual lines. In addition, a program has been developed to co-ordinate the railway with bus transport.

In regard to freight, it is principally the rail transport of lorries (Ro-La). Another transport system proposal is the expediting of loads, concentrating on marshalling into determined marshalling yards, and seeing that international loads run smoothly through the Czech Railway network.

Application of modern railway techniques primarily means installing automatic switches, remodelling stations with safeguarding equipment, setting up transport radiofication, introducing diagnostics, reconstructing railway crossings, and setting up simplified transport handling whereby the safeguarding equipment will be activated by remote control.

**GERMANY**

a) Environmental questions related to railway operations

aa) Noise control programme

The Federal Ministry of Transport, Building and Housing has, at first for the 1999 federal budget, an amount of 1.5 million DM for a programme "noise protection in hardship cases along existing railway lines"; amounts in the same order are planned for the follow-up years.

Depending on local conditions, planned measures include the installation of anti-noise walls, anti-noise panes and the "specially controlled track". In addition, it is intended to reduce, in coordination with the DB AG, noise already at its source, by retrofitting the existing rolling stock with quieter brakes with composite brake blocks. The DB AG is already testing vehicles with optimized sound insulation which reduces the sound emission by 10 dB (A) during the entire journey even without anti-noise walls. Where this value is not sufficient, the tracks are ground in addition to normal track maintenance (the so-called "specially controlled track"), which reduces the sound emission by another 2 to 3 dB (A).

The DB AG moreover announced its cooperation in elaborating a Europe-wide concept for the implementation of noise-reducing measures on goods wagons as well as measures to reduce the noise of diesel locomotives.

bb) Railway agenda 21

In consideration of the economic, ecological and social compatibility of rail transport, the DB AG has drafted the "railway agenda 21". This agenda is based on the "ecological concept of the DB AG". Starting out from this concept, the DB AG has formulated 7 strategic goals for a sustainable development:

- Creation of the preconditions for shifting a large portion of road and air transport to the rail
- Reduction of emissions as a contribution to reducing regional burdens and protecting the climate
- Reduction of the noise level of rail transport
- Protection of nature and landscape
- Strengthening the role of the railway within the framework of urban and regional development
- Increase in the cost effectiveness of investments and operation
- Establishment of an environmental management and auditing system.

cc) Energy-saving programme of the DB AG

With its energy-saving programme 2005 the DB AG plans to reduce, compared with 1990

- the specific consumption of primary energy related to the transport performance by 25 percent and
- primary energy consumption in stationary processes in absolute figures also by 25 per cent

up to the year 2005. Core elements of this energy-saving programme are:

1. Technical measures for improving

- locomotives, wagons (above all, purchase of energy-efficient locomotives and light rolling stock)
- the traction system
- stationary processes.

2. Measures for optimizing operations

- mixing of transport services with different demands on the network
- new train control systems for "smoother" operational procedures

3. Measures for increasing the use of capacities

- optimized timetables and connections
- attractive tariffs

- interconnection of transport modes (e.g. environmentally-friendly means of transport, including walking and cycling, as well as railway and aircraft )

b) Safety in railway transport

The Federal Ministry of Transport, Building and Housing formed a Steering Committee for the Improvement of Safety in Rail Transport with representatives from the Ministry, the Federal Railway Office and Deutsche Bahn AG, in order to study the possibilities of enhancing safety in rail transport. This Steering Committee has the task of investigating the causes of rail accidents and the formulation of proposals for improvement. After taking stock of company and state rules and regulations and of the existing safety technology the possibilities of reducing the number and consequences of accidents further and their realization will be analysed.

Working groups "operational safety" and "tank and vehicle technology" as well as a task force "organizational measures related to accidents" have been formed to carry out, in coordination with the Steering Committee, the studies according to various specific aspects. These working groups comprise competent and experienced specialists of the Federal Ministry of Transport, Building and Housing, the Federal Railway Office, Deutsche Bahn AG, associations and other institutions.

It is planned to terminate the activities of the operational safety working group shortly, in order to allow a final report to be submitted to the Transport, Building and Housing Committee of the German Parliament in the summer of 1999.

For the enhancement of safety, with simultaneous rationalization, Deutsche Bahn AG has commissioned the development of a new computer-controlled system (radio control of trains for automatic train control, automatic control of track elements (e.g. level-crossings), and dispatching.

The flow of information between the train control centre, vehicle and track element is effected via digitized radio data. The application of cab signalling contributes to enhancing the safety of operation.

The control centre monitors the operation of trains within this system by means of route permission. On the permitted route, the vehicle ensures safe operation by automatic communication with the track elements.

The first two pilot sections are planned to be put into service in the year 2000.

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

Effective from the end of 1999, Deutsche Bahn AG will transfer the overall management of orders, from the procurement of goods wagons to DB Cargo accounting, to a computer-assisted customers service centre throughout the Federal Republic of Germany.

Electronic communications and information technologies have a key function for this customers service centre and related DB Cargo business procedures. It is the objective to interconnect all systems involved in a standardized EDP environment, in order to ensure an optimal exchange of data and information. To this end, DB Cargo is developing a system (which, in part, has already been introduced), which, from the acceptance of orders to accounting, comprises all functions of order processing and which is moreover linked with the available EDP systems, also from the operational sector. This helps improve the transparency of processes in the future, from the placing of orders by the customer to the accounting of the transport operation.

- 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

In Germany, the companies operating combined transport and the DB AG have agreed on the application of a common telematics system in combined transport. At the terminals, operational procedures are to be controlled in the

future by a terminal operating system, which is designed as an open system and thus serves as a bridge between the data systems of the involved parties. It is desirable, but not yet decided, to complement the terminal operating system by a system of automatic consignment identification. This allows CT consignments to be reliably monitored and the relevant data to be fed directly into the train control centre. Various systems are under discussion; since innovative technological systems are expected to be developed (e.g. video identification and monitoring systems), a decision is not likely to be taken quickly.

Apart from obvious advantages of economic efficiency the application of telematics systems will improve the competitiveness of combined transport. Since this is in line with the transport policy goal of increasing the use of environmentally compatible modes of transport, the Federal Ministry of Transport, Building and Housing supports the equipment of terminals with the necessary hardware.

#### **HUNGARY**

(a)

To meet the law of 1995 on the protection of environment Hungarian State Railways Co Ltd launched a 7 year programme in value of 50 million USD in the same year to eliminate the damages caused by railway in last decades to the environment and to present their reproduction. The programme was extended by 2005 in 1998.

For its implementation in part, in 1999 the company issued its directions for protection of the environment addressing special duties and responsibilities to all special services and regional managements. Directions also extend to issues of the control, training, procedures, dangerous goods' handling and extraordinary events.



(b)

In 1998 the Special Directorate for Safety at Hungarian State Railways Co Ltd elaborated the strategy for renewal and replacement of the protection systems at mainline stations which imposed to settle new systems at 10 main junctions in the immediate future along AGC lines F 50, 52, 61, 71, 85 and also to build central traffic control and central traffic inspection systems for 6 national lines on F 50, 52, 56, 69, 71 85 AGC lines.

(c)

From 1<sup>st</sup> January 1997 Traffic Management Information System, IMFS as a network wide information system on freight traffic at the Hungarian State Railways Co Ltd has been in full operation. As one of the largest on-line system in Hungary it is based on 850 terminals at 200 stations with X25 transmission to a central tandem computer which manage freight traffic optimally considering the movement respectively loaded/empty state of the wagons and trains. TMIS will be attached to Western Europe's HERMES data exchange system in 1999 partially from the aid from PHARE programme of the European Union. From the end of 1997 TMIS is open to access for railway's clients, too. TMIS also serves as basis to ensure the quality of freight transport the system for which was introduced by the national railway company in 1999.

(d)

The National railway company follows a long-term national programme to develop 10 logistic centres in Hungary to cover the whole country with their services in rail/road combined transport. The largest one in Budapest is in construction already financed from EU's PHARE aid in part, to finish by 2000 for hundred thousand TEU capacity per year. Companies to develop the logistic centres at Székesfehérvár and Szolnok are set up already and that is in preparation in connection with the construction of the river port on the Danube at Győr.

**LATVIA**

- (a) On 23 March 1999 the Railway Administration (the Regulator) has been organized. The following environmental duties relate to our Administration:
- to work out the environmental policy and action programme, to keep in order the environmental self-control system;
  - to size up the threat what the railway infrastructure causes to the people's health and environment, as well as to realize all necessary activities for diminishing such threat.
- (b) The Statute of Railway Technical Inspection and the Regulations of Railway Technical Exploitation are worked out.
- (c) In order to develop our information system "APOVS" (the Automatic System for Rail Transport Effective Management) the investment programmes ensure Ls 2,960,000.- for the organizing of the Freight Traffic Information System ("KRAIS") which will allow to automate all calculation process of freight traffic, as well as facilitate the work with clients.
- (d) There are the necessary preconditions created for the tickets reservation on "train-bus" or "bus-train".

**LITHUANIA**

**(a)**

Klaipeda railway station is located near the seashore, in the very sensitive ecologically area. The Intensive use of this object threatens the environment, especially the ground water, which is near the earth's surface. Therefore Lithuanian Railways envisage the implementation of the radical measures for preserving of the ground water, installing the screen for the ground water in the territory of the station. These works are carried out in the framework of the Project for reconstruction of Pauostis railway station (a part of Klaipėda railway station); the estimated value of the Project - 8.51 mil. USD.

At the main wagon wash of Lithuanian Railways in Skersabaliai in the process of the biological cleaning specially selected micro-organisms are being used - the destructors of pollutants. For the final stage of the cleaning of the polluted water activated silt is being used. This makes the process of cleaning of the used water simpler and cheaper.

During the capital reconstruction of the tracks on the Corridors IXB and IXD, the environmental measures will be implemented, polluted ballast and soil will be gathered and localized.

**(b)**

In order to secure the traffic safety, the capital rehabilitation of tracks is being carried out (217 km was reconstructed during the years 1994 - 1998); automatics, communications and energy supply installations are under modernization (in 1998 a communication line in the section Kaisiadorys -

Radviliskis was modernized, using interest free loan granted by the Government of Denmark), rolling stock pool is being modernized.

(c)

In the management of rail goods traffic computers are being used for:

- Drawing up, correction and coordination of train delivery registers;
- Drawing up of customs declarations;
- Control of track occupation at stations;
- Drawing up, correction and transferring of train lists, drawing up of various references based on the train lists;
- Registration of imported and exported wagons;
- Drawing up of reports and statistical accounts on freight transportation and the use of wagons.

(d)

In 1998 a computerised system for wagons' delivery stations was established; the system has been connected with the computer centres and delivery stations of the neighbouring railways. In 1999 a program for drawing up of custom declarations was installed. At present computer information system for transportation is under gradual installation. Different hardware and software is being used for traffic control. 435 personal computers have been installed at the Railway administration, part of them are connected into the local computer networks.

#### THE FORMER YUGOSLAV REPUBLIC OF MACEDONIA

(a)

No new relevant developments have been made.

(b)

In the next two years, automatic stop line and locomotive devices on the railroad Tabanovce-Gevgelija (E-85), telecommand and radio-dispatching system will be built-in.

(c)

For the registration of freight cars including their location, entry and exit from the network, the number and the type of the car is followed by computers, but the structure of the freight is not included.

The use of computers in the technological operations for management of rail goods traffic is expected in the forthcoming period.

(d)

No new relevant developments have been made.

**RUSSIAN FEDERATION**

(b)

The State programme to enhance the safety of train traffic on Russian railways is currently being implemented. It encompasses a set of measures to develop, produce and introduce new equipment to make the passage of red signals and train collisions impossible, to monitor train and brake performance, to prevent unauthorized departures from tracks in stations by trains and individual wagons, and to raise the reliability of automatic brakes in rolling stock, automatic devices and communications and power supply equipment.

In order to raise the level of traffic safety, automatic train braking management systems have been introduced, together with integrated locomotive safety devices, electronic speed measurement systems with automatic decoding of traffic parameters, duplex radio communications for trains, new types of fault detectors to check wagon components, etc.

(c)

Russian railways use an automated system for on-line management of transport operations, in which a computer model processes information on train composition and location supplied by stations.

This system underpins the establishment of unified traffic control centres.

The aim in establishing these centres is to bring together the management functions of the traffic control system and to upgrade the management of transport operations using reliable, up-to-date information which is collated for the specific purpose and is identical at all levels of information management.

(d)

On Russian railways great importance is attached to the introduction and development of combined transport operations, together with other modes of transport: the transport of large containers and vans (trailers etc.) using special trains.

The "East Wind" train on the Berlin - Moscow route initiated accelerated container operations. Such trains now also run between Odessa and Moscow, between Novorossiisk and Moscow, between Budapest and Moscow, etc. A technology for the accelerated passage of containers in transit on the trans-Siberian main line has been developed and introduced, so that containers can be transported in 9-10 days over a distance of some 10,000 kilometres from Nakhodka to Buslovskaya (on the Finnish border) and to Brest (on the Polish border).

The development of container trailer operations is also of great significance. Specially adapted flat cars have now been produced, and the necessary terminal infrastructure has been made ready to handle road vehicles in the Moscow and St. Petersburg transport nodes using the new technology.

The next stage in the introduction of container trailer operations is due to cover the sectors Moscow - Novorossiisk, Helsinki - Moscow, Bratislava - Moscow, Chisinau - Moscow and Brest - Moscow.

# **SLOVAKIA**

## **(a)**

The main measures decreasing negative impacts of the Slovak Railways operation on the environment:

- realisation of areal transport system of hazardous wastes in accordance with the valid legislation in waste management,
- purchase of ecological storage and containers for workplaces where substances harmful to waters are dealt,
- liquidation of underground waters in Kosice and ground level and underground waters in Cierna nad Tisou.

## **(b)**

The development of accidents in 1998 corresponded with previous period. The total number of accidents as well as the number of accidents of category "A" (large accidents) decreased and regarding the above number this is the lowest coincidence of large accidents.

From long-term view development of accidents compared to last five years the situation is as follows:

Accidents in 1994 - 1998					
Total number / ZSR					
Category	1994	1995	1996	1997	1998
A	31/16	28/18	23/6	24/10	20/4
B	15/4	12/2	9/1	12/3	13/5
C	105/40	115/53	106/38	102/36	100/3 6
D	855/723	1097/869	1060/818	949/736	836/6 25
Total:	1006/783	1252/942	1198/863	1085/785	969/6 70
Consequences of accidents in 1994 - 1998					
Property losses (million SKK)					
Year	1994	1995	1996	1997	1998
ZSR	14.7	34.2	17.6	43.7	13.2
Other influence	2.8	4.8	10.4	4.9	4.5

Within causality of decisive accidents of categories A - C human reason prevailed and in 36% operation workers caused the accidents.

## **(c)**

The information system IRIS-N (management information system for goods traffic) is used in the management of rail goods traffic with the operation character of the information system, significantly oriented to improve the communication in data exchange with customers and neighbouring railway

administrations. IRIS can offer the acquired data in required form for applications of the system and also for other information systems which need data on transportation and freight operation. Since May 1998 IRIS-N enabled to replace the previous SIS BEVOZ in top quality what is a significant feature regarding the trade activities of the customers.

In final stage it presupposes the use of 733 terminals in 324 railway stations. Today 203 railway stations are connected to the above system. Until today 121 railway stations have not been connected yet, as these are technically not available, it is 38% of the total number.

From 1 March 1998 the information technology maintains the collection of international and inland freight bills in all technically connected railway stations. In other stations the collection is covered through non traction circuits.

IS VSP information system "Information system of east Slovak transshipment places (between wide and normal rail gauge)" solves the specific transportation - shipment situation in Cierna nad Tisou, Matovce on wide gauge track. Control of the export and import of goods in east Slovak shipment places is covered by the Kodex application.

In the course of 1998 local information systems INF SR and INF SRT (information systems for wide gauge rail track) were innovated. Within the innovation also organisational changes were followed regarding the establishment of trade - transshipment centre.

(d)

In 1998 III. period of construction of combined transport terminal in Dobra close to Cierna nad Tisou was accepted with normal and wide gauge rails for horizontal and vertical shipment. In final stage the terminal will provide equipment for all systems of shipment in combined transport. The main task of the terminal is to cover the transit connection of east markets with the west European markets.

In 1998 the following wagons entered the ZSR park :

- 60 pieces of wagons type Sdgnss (packetwagons) for combined transport (semitrailers, trucks, containers and swapbodys),
- 20 pieces of wagons type Habis (with movable sides) for individual goods and pallets traffic.

Last year 616 wagons were reconstructed.

## **SLOVENIA**

(a)

In 1999 Slovenian Railways we started with the project Environment Management System. The aim of the project is to introduce such environment management systems, which would be in accordance with the standard SIST EN ISO 14001, and to obtain a certificate in this respect.

(b)

Slovenian Railways has been endeavouring to modernise railway network to the point at which it will provide safe and rapid transport of passengers and cargo.

In 1995 the National Programme of Slovenian Railways Infrastructure for the period up to 2005 was adopted. The basic objective of this programme is to adapt the status of the Slovenian railway infrastructure to the new demands and to the level of the developed European countries by taking into consideration the harmonised technical standards and parameters in line with the agreements AGC, AGTC, TER and other documents, the signatory of which is also the Republic of Slovenia. The programme comprises the reconstruction of the existing lines, the construction of supplementary parts to the existing lines and junctions, and the construction of lines for high and higher speeds. It means also higher level of safety. The statistical data in this field are favourable.

In 1998 Slovenian Railways signed a contract for the purchase of 30 electric motor train-sets for suburban transport and a contract for the purchase of 50 freight wagons.

All these investments are intended to increase the level of safety and reduce the adverse impacts on the environment (traffic accidents, excessive noise, air pollution, lower energy consumption, a higher level of friendliness to the environment (possibilities of recycling of the majority of materials used for production of trains).

(c)

The Slovenian Railways Information System consists of Business Information System (BIS) and Transport Operation Information System (TOIS).

The SR Transport Operation Information System (TOIS) enables real time capturing, control and monitoring of transport-technological (wagons, locomotives, trains) and transport-commercial (goods transport offices, consignments, accounting of services) activities of the railway in real time. The basic information collected in this way enable us to form the necessary records and statistics in accordance with the valid regulations of a particular railway administration and the international railway union UIC. Besides it is possible to separate business information necessary for different management and decision levels. The information system is based on the system analysis of all activities in the SR technological, commercial and business area.

The present business information system does not meet the requirements of modern business any more, therefore we decided to modernise it. The new system will be based on a standard SAP R/S system.

(d)

Slovenian Railways are quite active in the field of combined transport. The aim is to shift as much cargo from road to rail and in this way protect environment and reduce road traffic..

**SPAIN**

**(a)**

- New HSR line Madrid-Sevilla, under operation since 1992 (471 km, double track, 1,435 mm).
- New HSR line Madrid-Barcelona, under construction. The section Madrid-Lleida should be finished by 2002, and the sections Lleida-Barcelona and Barcelona-France by 2006 (1,435 mm).
- The EUROMED service linking Barcelona, Valencia and Alicante is in operation since 1997.
- New high-quality passenger services have been implemented this year between Madrid and Valencia.
- A new High Speed Link between Madrid and the North (Valladolid) is under study. It would make the railway highly competitive compared to the road.

**(b)**

- The Regulation on Train Composition and Brakes is being updated, in order to put it into line with the existing international standards.
- A new prototype for the Automatic Protection of Trains has been installed in the lines Barcelona-Valencia and Valencia-La Encina. The maximum train speed can be thus continuously supervised, according to the track conditions and signalisation. The system could be implemented in 2000.
- Installation of modern prototype equipments at both edges of the Mediterranean Corridor (Tarragona and La Encina), to assess the impacts of the wheels on the rail (June 1999).

**(c)**

The following systems are being used in the management of freight traffic:

- SACIM for general goods.
- SACICO for containers.
- SITRA for passenger and goods traffic.

For ticket selling and passenger information:

- SIRE for sales and seat reservations.
- VISIR for sales without seat reservation.
- INFOTREN for information on services, fares, routing, etc.

Others:

- SIGES for managing special trains.
- SIGLO for managing of locomotives.

**(d)**

New technologies have been adopted to solve the problems derived from the different gauge system in use in the Iberian Peninsula. The TALGO system is in operation since 1969 for passenger trains, and is expected to be developed for freight traffic in 1999.



UNITED KINGDOM

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

1. Since April 1994 Railtrack has been responsible for all the track and infrastructure, as well as safe operation and maintenance of the network. Railtrack has a statutory responsibility to carry out what it thinks expedient in the light of safety and reliability and consequently lineside management and other environmental issues are a matter for Railtrack.

2. Under the Environment Protection Act 1990 a duty can be applied to railway operators requiring that they clear litter and refuse from their land. However, at present the existing duty on the railway industry is unclear. The Government will be issuing Orders in Parliament clarifying the duty on Railtrack and the train operating companies to keep land within 100 metres of a station clear of litter and refuse.

3. A revised Code of Practice on Litter and Refuse (Under the Environment Protection Act 1990) is being issued, which gives practical guidance to local authorities and other bodies which are subject to litter duties. Railtrack and the train operating companies will be subject to the Code which sets out how quickly differing types of railway land should be returned to a set cleanliness standard.

**(b) Safety in railway transport**

Safety record

1. The Health and Safety Executive's (HSE's) railway statistics for the UK for 1997/98 (published 10 Dec 98) showed a mixed picture. Significant train accidents (collisions and derailments which are potentially the most dangerous to passengers and which are regarded as the barometer of railway safety) were the lowest on record for the second year running. However, fatalities (excluding trespass and suicide) rose, partly as a result of the Southall accident and partly because of a significant increase in level crossing deaths. Accidents attributable to vandalism also rose markedly.

Trespass and vandalism

2. In December 1998 the Health and Safety Commission's Railway Industry Advisory Committee (RIAC) published "A Good Practice Guide" on Preventing Trespass and Vandalism on the Railways. RIAC brought together all sections of the railway industry, the rail unions and rail passenger groups to produce this Good Practice Guide. The Guide provides practical help in focusing efforts on partnership measures which are most likely to be effective. The Government hopes that this will lead to a reduction in trespass and vandalism incidents.

### Train Protection Measures and Mark 1 (slam door) rolling stock

3. At the end of 1998 the Health and Safety Commission (HSC) submitted formal proposals to Ministers for new railway safety Regulations covering train protection systems and Mark 1 rolling stock. The new Regulations will require TPWS (Train Protection and Warning System - to automatically stop trains in danger situations) to be fitted to all trains and to key signals by 1.1.2004 and will require unmodified Mark 1 rolling stock to be withdrawn by 1.1.2003. If Mark 1 stock has been modified to improve its crashworthiness (to prevent one carriage overriding another in the event of a crash) it is proposed that it can remain in service until 2007 or if it has been totally rebodied, that it can remain in service indefinitely. Ministers are considering these recommendations and expect to be able to make an announcement in the Spring about making new railway safety Regulations.

#### **(c) Use of computers in rail transport operations**

Railtrack's Total Operation Processing System (TOPS) continues to be developed: recent improvements allow container data to be held within the system, and TOPS data is used to produce the CIM international consignment note. Links with continental railways allow the exchange of traffic monitoring messages.

#### **(d) Introduction of new transport technologies and application of modern techniques to railway operations**

Most Train Operating Companies are now making use of the Internet to advertise their services, and some use it to sell tickets or to provide up-to-date train running information.

70 new vehicles being provided for North Western Trains (NWT) will have closed-circuit television (CCTV) cameras fitted to the interior and on the front of trains.

Virgin Trains has ordered Active Tilting Trains for introduction on the West Coast Main Line.

In-cab signalling is being developed by Railtrack.

Telephone call centre operators have developed technology to provide quicker, more accurate and more comprehensive information to customers.

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