

**THE RESEARCH OF THE IMPACT OF IMPLEMENTATION OF
THE DIRECTIVE 94/55/EC ON THE APPROXIMATION OF THE
LAWS OF THE MEMBER STATES WITH REGARD TO THE
TRANSPORT OF DANGEROUS GOODS BY ROAD, AND THE
DIRECTIVE 96/49/EC ON THE APPROXIMATION OF THE LAWS OF
THE MEMBER STATES WITH REGARD TO THE TRANSPORT OF
DANGEROUS GOODS BY RAIL, AND THE DIRECTIVE 2000/62/EC
AMENDING THE DIRECTIVE 96/49/EC**

S U M M A R Y

Chief of study: Prof. A. Baublys,
Transport Science Institute, VGTU

Application of the Directive 94/55/EC in Lithuania

The EU Council Directive 94/55/EC "On the approximation of the laws of the Member States with regard to the transport of dangerous goods by road", amended by the Directive 96/86/EC, applied with regard to the technical progress

The objective of the Directive:

- To approximate the laws of the Member States and to co-ordinate them with the ADR requirements;
- To facilitate the free movement of goods and services, ensuring the high safety standards.

The digest of the content of the Directive:

- The ADR rules should be applied also to the transport of dangerous goods inside the country;
- The Directive allows the Member States to have special provisions for tare and labelling, for language use, for the use of tanks and containers, for indicated temperature regime during the transportation, for temporary exemptions without discrimination, etc.;
- The Member States shall indicate the national requirements for the transport of small amounts of certain dangerous goods in the internal territory within the country;
- Vehicles registered in other countries than those bound with the ADR Agreement have to meet the ADR requirements if the dangerous goods are transported through the territory of the Community;
- A special committee of the transport of dangerous goods is established, afterwards the Member States may suggest more strict rules to the Commission.

The Directive considers the following aspects:

- Enhancement of safety;
- Unified European rules for the transport of dangerous goods in the entire EU territory;
- The ADR is applied for the national transportation and there may be necessary considerable investments for new transport means, etc.

The essence of this Directive - the national and international transport of dangerous goods by road in the EU countries shall meet the ADR requirements.

Present situation in Lithuania. The transport of dangerous goods by road is regulated by the European Agreement on the international transport of dangerous goods by road (ADR). In the Republic of Lithuania hazardous materials are transported by transit as well as within the country.

In the road transport the share of dangerous goods is 25% of all the amount of freight transport. This percentage is decreasing according to the statistical information. However it refers only to the joint stock companies, which supply the information on their activities to the

Department of Statistics. The activities of private freight transport enterprises are not fully reflected in the statistical data.

Application of the Directive 96/49/EC in Lithuania

The EU Council Directive 96/49/EC “On the approximation of the laws of the Member States with regard to the transport of dangerous goods by rail”, amended by the Directive 96/87/EC, with regard to the technical progress

The objective of the Directive:

- To approximate the laws of the Member States and to unify them according to the RID requirements,
- To facilitate the free movement of goods and services ensuring the high safety standards.

The digest of the content of the Directive:

- The RID rules have to be applied to the national transport of dangerous goods as well;
- The Directive allows the Member States to apply special provisions for tare and labelling, for language use, for the use of railway wagons, tanks and containers, for indicated temperature during the transportation process, for temporary non-discriminatory exemptions, etc.;
- The Directive allows the Member States to apply more strict standards for the transportation in tunnels with the similar conditions of the Channel tunnel;
- The Member States may establish less strict requirements for the transport of certain dangerous goods in small amounts;
- The Member States may allow the transport of dangerous goods by less strict conditions, in the cases when the goods are transported locally by short distances in the territories of ports, airports or industrial territories;
- The transport of dangerous goods between the Community Member States and the third countries shall meet the RID requirements, except the transport to/from the countries of the former Soviet Union, which are not the COTIF members states.

The Directives regards the following aspects:

- The Directive 96/35/EC on the nomination and professional training of the instructors for traffic safety in the transport of dangerous goods by road, rail and inland waterways;
- Enhancement of safety;
- Unified European rules for the transport of dangerous goods by rail in the entire EU territory;
- The RID is applied to the national transport and there may be necessary considerable investments for new railway wagons and tare.

The essence of this Directive – the national and international transport of dangerous goods by rail in the EU countries has to meet the RID requirements.

Present situation in Lithuania. The transport of dangerous goods by rail is regulated by the following: to the „East“ - Annex 2 of the OSJD Agreement on the transport of dangerous goods by the railway transport on international routes (SMGS) *Regulations of transportation of dangerous goods*, to the „West“ - Annex B *General rules of International Freight transportation by railway of agreement (CIM)* of the Convention on the international transport of dangerous goods (COTIF), Annex 1 *The International rules for the transport of dangerous goods by rail (RID)*.

The transport of dangerous goods by rail in Lithuania makes the share of about 55% of the whole amount of goods transported. By rail there are transported bulk goods, as well as liquid goods, and the goods requiring a special control and attendance. Fuels, lubricants, fertilisers and oils make the biggest share of the goods transported.

The assessment of the impact of the implementation of the Directive. After the analysis of the requirements of the Directive 94/55/EC on the approximation of the laws of the Member States with regard to the transport of dangerous goods by road and the Directive 96/49/EC on the approximation of the laws of the Member States with regard to the transport of dangerous goods by rail, and the Directive 2000/62/EC, amending the Directive 96/49/EC, it was found out that the greatest impact will be perceptible for administrative structures, both: the state owned ones - by receiving supplementary functions of regulation, control, EU conformity requirements, use relevancy and revised evaluation - as well as by such carriers as the JSC “Lithuanian Railways”, the Lithuanian National Road Carriers Association “LINAFA” and the enterprises producing chemical materials.

In 1995-2003 there have been prepared many legal acts and normative documents regulating the transport of dangerous goods. The implementation of the latter will exercise a direct influence on transport efficiency, enhancement of safety and decreasing of negative environmental impact. Annex 1 contains the list of legal documents necessary to be prepared for the regulation on the transport of dangerous goods.

Principally the implementation of all the Directives will influence the administrative structures. Already at present the functions foreseen in certain directives are transferred to the functioning institutions, other institutions will have to be reinforced. Besides, new institutions will have to be established.

In Lithuania the transport of dangerous goods is regulated by the Government through the authorised institutions, such as: the Ministry of Transport and Communications and its subordinate State Road Transport Inspectorate and State Railway Transport Inspectorate; the Ministry of Interior and its subordinate Fire and Rescue Department, State’s Border Protection Department, Territorial Police institutions; the Ministry of the Environment, the

Ministry of Economy, the State Non Food Products Inspectorate; the Ministry of National Defence and the Department of Civilian Protection; the Ministry of Social Security and Labour; the Ministry of Health and the agencies: 1) the State Public Health Service under the Ministry of Health, 2) the Health Emergency Situation Centre under the Ministry of the Environment, 3) the Poisoning Control and Information Bureau, 4) Radiation Safety Centre; the Ministry of Finance and Department of Customs. Each of these institutions carries out functions accredited to it according to the competence. For each institution its functions of regulation of the transport of dangerous goods are conferred by the laws or other legal normative acts.

After the analysis of the present situation in the transport of dangerous goods it may be concluded that there are no rules and technology necessary for the transport of dangerous goods, no analysis of the transport of dangerous goods is carried out, no statistical data on dangerous goods is being accumulated. Therefore it is necessary to establish in Lithuania a competent institution for co-ordination of the transport of dangerous goods and other related actions. This institution should be authorised to control the transport of dangerous goods; to carry out expertise in the companies related to the transport of dangerous goods; to make solutions on all issues related to the transport of dangerous goods. Such an institution may be nominated the *Control and Expertise Service*.

The Control and Expertise Service ought to be established at the Ministry of Transport and Communications as in this Ministry there has already been established the Division of Transport of Dangerous Goods. Thus it would be a more cost-effective move than the establishment of such a service in other ministry or governmental institution. The above mentioned service shall require the staff of 5 people with an average monthly wage of 2000 LTL per person.

Additional means

- It is necessary to equip safe transport parking areas for the vehicles carrying dangerous goods, as well as for their control and, if necessary, for storage. Such parking sites should be equipped at the customs control posts situated in Saločiai, Lazdijai, Kalvarija, Raigardas, Panemunė and at the regional posts of the State Road Transport Inspectorate, situated in Vilnius, Kaunas, Šiauliai, Panevėžys and Klaipėda. Thus, firstly there should be equipped 10 such parking areas. Each parking area should cover about one hectare. The area should be safely fenced. Installation of such fences should cost about 150 000 LTL. Paving of the territory and arrangement of roads should cost about 330 000 LTL. To this sum the price of the land should be added, which may vary depending very much on the location.

- To translate the ADR and RID into the Lithuanian language and to co-ordinate their terms. For this purpose the sum of 180 000 LTL is necessary.
- For the scientific supervision of the transport of dangerous goods a yearly sum of 75 000 LTL is required.

Impact on JSC “Lithuanian Railways” (AB „Lietuvos geležinkeliai“). The EU Directives require transporting dangerous goods in the territory of the EU according to the uniform *Rules of the transport of dangerous goods* (RID). The same provisions should be in force in the Republic of Lithuania after joining the EU. For the co-ordination of the legal acts of the Republic of Lithuania with the EU Directives, considering that in Lithuania the railways of different gauges are operated, the Government of the Republic of Lithuania on 22 January 2002 established by the Resolution No. 84 the Order of the transport of dangerous goods by rail in the territory of the Republic of Lithuania. In this order it is indicated that from/to the COTIF member states and by the internal railways of 1435 mm gauge dangerous goods shall be transported according to the RID rules; however from/to the OSJD member states and on the internal railways of 1520 mm gauge dangerous goods shall be transported according to Annex 2 of the International Agreement on the Transport of Goods by Rail (SMGS) – *Rules for the transport of dangerous goods*. All the mentioned *Rules for the transport of dangerous goods* have essential differences. Although Annex 2 of the SMGS is based on the RID rules, it indicates more materials nominated as dangerous than the RID (i. e. according to the RID the materials are transported as not dangerous, and according to Annex 2 of the SMGS – as dangerous materials). There is also difference in the indication of materials allowed to be carried by one freight unit or one wagon. Also there is difference in filling in the accounting documentation, etc. Even more differences are in the conditions of the transport of dangerous goods in the CIS countries, for instance: the lists of materials allowed to be transported, certain dangerous goods have to be co-ordinated with the Ministry of Transport of the Russian Federation, the transport of certain materials is allowed only with the consignors escort, there is difference in the marking of dangerous goods, inscriptions in documents differ too, etc.

The impact on the transport of dangerous goods by rail will depend on the reform of JSC “Lithuanian Railways” as well as on the way how the competition conditions between carriers will be created in Lithuania. Since in such a case too high requirements for the carrier access of road transport market and discrimination of rights for infrastructure use may limit the decrease of costs of transport services.

Global problems should be mentioned as well: physically worn out railway infrastructure, aged railway rolling stock.

Lately JSC *Lithuanian Railways* has requested the VGTU Transport Research Institute to elaborate a Traffic Safety Programme, which should analyse the problems covered here, as well as many other problems that have not been mentioned.

Impact on the Lithuanian National Road Carriers Association “LINAFA”. From January 2002 the Association "LINAFA" has started the training of specialists on the transport of dangerous goods. However inspectors are not trained. The “LINAFA” should extend the training of all levels specialists of the transport of dangerous goods.

From 31. 12. 2003 the carriers of the “LINAFA” and other private carriers by road shall have to transport dangerous goods in line with the EU requirements. Therefore the old vehicles shall have to be exchanged by new ones meeting the EU requirements.

Until 2004 it is allowed to use uncertified tare (not meeting the EU requirements), however later on in future it will be necessary to pack dangerous goods in a special tare, i. e. the one that has undergone testing in the laboratory, which will be confirmed by the code. Establishment of such laboratories should be initiated by the State Road Transport and Railway Transport Inspectorates. If until 2004 such laboratories do not appear, the transport of dangerous goods will be impossible. Another option – to ask for the code accreditation by any Member State of the European Union. However, in such a case, the price of goods would increase by 3-4 times. Establishment of the mentioned laboratory should cost 5 179 200 LTL.

During the transport of dangerous goods a partial control is exercised by the police, frontier services and customs. The control shall be carried out according to the EU requirements, by filling in special tables and by submitting them to the institution controlling these activities. However such an institution, to which the reports and tables could be submitted, does not exist yet in Lithuania. Such an institution could be the above-mentioned Control and Expertise Service.

According to the ADR provisions, each one has to know the duties and responsibilities. Therefore the “LINAFA” has to elaborate relevant fliers and disseminate them to the members and other road carriers.

Impact on carriers. Dangerous goods are carried by certified automobiles, fitting for the transportation of dangerous goods and having the ADR sets. Depending on the company of make, a new automotive train (a truck tractor and a semitrailer) adapted for the transportation of dangerous goods, costs about 20 thousand LTL more than the analogous automotive train, which is not prepared for the transportation of dangerous goods. The prices may differ depending on the class of dangerousness of goods transported.

The adjustment of automotive train for the transportation of dangerous goods every year additionally costs about 6 thousand LTL (constant renovation of the ADR set – 700 LTL, certificate – 160 LTL, the costs of more frequent exchange of tires, as well as other costs of maintenance and survey – about 5 thousand LTL).

The costs of drivers' training may reach a sum of 1 thousand LTL (300 LTL is the price of the drivers courses, other expenses - wages paid by the companies to their drivers during the courses - make about 700 LTL).

The costs of the training of a specialist – 1450 LTL (450 LTL is the price of the courses for specialists, other expenses – wages paid by the companies to their drivers during the courses – make about 1000 LTL).

For the transportation within Lithuania carrier companies operate 216 lorries, which do not meet the EU requirements for the transport of dangerous goods. For replacing this fleet a sum of 27 million LTL is required.

The forecasting made until 2010 allows the predication that for the transport of dangerous goods 649 drivers should be trained, or 92 drivers each year. During the following three years there should be trained 220 – 290 specialists for safety responsible for the transport of dangerous goods, or in average 85 people every year.

General assessment of the impact reaches the sum of 38 million LTL. These costs will divide up per two years: 27 215 250 LTL of them – costs which will fall to private business and 10 784 750 LTL – the costs finance from State's budget (see Annex 2).

CONCLUSIONS

1. The analysis of the present state of the transport of dangerous goods demonstrates that no united system of dangerous goods transportation for all kinds of overground transport is formed, as well as there is no analysis and statistical data related to the transport of dangerous goods.
2. The direct and entire transposition of the Directive 96/49 (and the technical requirements of the Directive 2001/16), regulating the co-ordination of rules on the transport of dangerous goods would make a significant obstacle for the transportation by rail from the CIS countries.
3. At present in Lithuania the transport of dangerous goods (ADR) by international routes is optimum regulated and controlled, however the local transportation is not sufficiently regulated. Local carriers transporting goods within the limits of the country will

encounter numerous difficulties as there are not many specialised companies and goods are transported by the transport means, which are not adjusted for the transportation of dangerous goods. The control of local carriers, often the owners of one or two transport means, is quite weak.

4. The impact of the changes caused by the investigated Directives will be in evidence for the companies of chemical industry after the carriers will increase the tariffs of the transportation of dangerous goods due to the growth of expenses.
5. The impact on the railway transport will depend on the reform of Lithuanian railways and on the mode of creation of competition conditions among drivers, because too high requirements for the drivers' access to the market in the case of the road transport and discrimination in conferring the rights of using the railway infrastructure will limit the decrease of costs of transportation services.
6. At present in Lithuania there is no scientific research or otherwise institution investigating the issues of the transport of dangerous goods, as well as scrutinising the changes in the ADR and RID requirements, elaborating implementation methodologies, supplying information and consultations for the carriers of dangerous goods, providing support for the State Road and Railway Inspectorates in preparation of tests for examinations of drivers and train operators as well as of the specialists on the safety of dangerous goods. For this aim the Ministry of Transport and Communications has to find financing resources.
7. State Road Transport Inspectorate shall foresee and order the equipment of safe transport parking areas for the control and, if required, for the safeguard of vehicles carrying dangerous goods. Besides, the Inspectorate has to initiate the establishment of companies providing the services of handling, transportation of dangerous goods, etc. (in case if the inspector indicates that further transportation of goods is dangerous).
8. Until 2004 the use of non-certificated tare (not meeting the EU requirements) is possible. However in future it will be necessary to pack dangerous goods in a special tare, i. e. in the tare tested and encoded in the laboratories. State Road and Railway Transport Inspectorates should initiate the establishment of such laboratories. If until the year 2004 such laboratories will not be established the transport of dangerous goods will not be possible.
9. Partial control of the transport of dangerous goods is performed by the territorial police institutions, State's Border Protection Department and/or Department of Customs. The control shall be performed in line with the EU requirements by filling in special tables

and by submitting them to an institution controlling these activities. However, for the time being there is no such an institution in Lithuania to which such accounts could be submitted. Such an institution should render a new service for control and expertise of the transport of dangerous goods.

10. New ADR and RID rules are published in the official languages (ADR – in English and Russian, RID – in German and French). It is necessary continually to translate them into the Lithuanian language and to perform their technical redaction (every two years).
11. In regard of the whole country and its citizens, the implementation of the EU standards is absolutely positive because the risk factors of the transport of dangerous goods and the rates of road accidents will diminish together with the possible pollution of the environment.
12. From 1 January 2003 the Department of Statistics is ready to accumulate and generalise the statistical information on the transport of dangerous goods. However the road transport companies do not provide it with data. It is recommended for the Ministry of Transport and Communications to take relevant measures.
13. If necessary, the Ministry of Transport and Communications may initiate the suspension of the implementation of the directives, as it happened for instance, in the case of farmers in the spring hauling fertilisers by their own vehicles, etc.

**LIST OF LEGAL DOCUMENTS NECESSARY TO BE PROVIDED FOR THE
REGULATION OF THE TRANSPORT OF DANGEROUS GOODS**

The documents necessary to be provided	Recommended date (year) of implementation
Instructions for inspectors, controllers, experts	2003
Amendments and supplements to the penal code, civil code and administrative code on the penance for transgressions in the field of the transport of dangerous goods	2004
Legal acts necessary to be provided for certificate and special inspection of receptacle (vehicles' tare, containers and etc.) carrying dangerous goods	2003
Guider of issuing eligibility certificates for the transport of dangerous goods	2003
Printed instructions in the Lithuanian language for the drivers on the most often transported chemical materials	2004
The order of cleaning of vehicles' tare, containers in Lithuania	2004
Preparation of methodological materials for: <ul style="list-style-type: none"> • lecturers; • staff responsible for the transport of dangerous goods; • drivers; • inspectors-controllers; • experts. 	2004
Amendments and supplements to the road traffic rules on: <ul style="list-style-type: none"> • necessary documents; • special equipment; • requirements for the transport crew; • parking requirements; • safe speed 	2004

QUANTITATIVE ASSESSMENT OF SUBSEQUENCES^{*/}

Title of means	Cost, LTL
Costs of drivers' training (drivers' courses – 300 LTL + wages during the courses – 700 LTL per person yearly) <i>*/1</i>	92 000 LTL
Costs of the training of a specialist for safety (courses - 450 LTL + wages during the courses – 1000 LTL per person yearly) <i>*/1</i>	123 250 LTL
Establishment of the Control and Expertise Service for the transport of dangerous goods (yearly expenses) <i>*/2</i>	250 000 LTL
Renewal of old lorries used for transportation within the limits of the country (for three years period) <i>*/1</i>	27 000 000 LTL
Equipment of the safe parking areas for vehicles transporting dangerous goods, for their control, and if required, for their safeguard (onetime investment expenses) <i>*/2</i>	3 300 000 LTL + cost of 10 ha land site in different localities
Translation of the ADR into the Lithuanian language and co-ordination of the terms (every 2 years) <i>*/2</i>	80 000 LTL
Translation of the RID into the Lithuanian language and co-ordination of the terms (every 2 years) <i>*/2</i>	100 000 LTL
Establishment of the laboratory for testing of containers (onetime investment expenses) <i>*/2</i>	5 179 200 LTL
Scientific survey of the problems of the transport of dangerous goods (yearly expenses) <i>*/2</i>	75 000 LTL

**/1* – the costs fall to the private business

**/2* – the costs finance from State's budget

**/* – The evaluation is presented here only for the road transport. For the railway transport such evaluation will be performed in detail in the course of elaboration of the Lithuanian Railways' Traffic Safety Programme.