

Hazardous Materials Regulations in Europe and Implementation of 1996 IAEA Recommendations

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HAZARDOUS MATERIALS REGULATIONS IN EUROPE

Since the turn of the century, a flourishing exchange of goods has developed in Europe. Probably the first dangerous good to be transported over long distances and therefore in need of regulation was gunpowder. As early as 1831 regulations existed for the Rhine carriage of these goods; they had been agreed upon internationally by France, the Netherlands, and Germany.

In 1891, the first regulations for international dangerous goods transport by rail (known as the RID Convention) were framed. The range of dangerous goods was extended to include toxic, corrosive, explosive, and flammable substances.

Overview: Classes of Dangerous Goods	
Class	Name of Class
1	Explosives
2	Gases: compressed, liquefied or dissolved under pressure
3	Flammable liquids
4.1	Flammable solids
4.2	Substances liable to spontaneous combustion
4.3	Substances which in contact with water emit flammable gases
5.1	Oxidizing substances
5.2	Organic peroxides
6.1	Poisonous (toxic) substances
6.2	Infectious substances
7	Radioactive material
8	Corrosive substances
9	Miscellaneous substances

Fig. 1 Overview: Classes of Dangerous Goods

More modes of transport were added: motor vehicle and airplane. Over the decades, each mode of transport developed its own specific set of regulations. So, after World War II, a hotchpotch of rules had come about whose effect was to make Europe and indeed the rest of the world suffer.

UN AND IAEA RECOMMENDATIONS

It was not until after World War II that radioactive material was carried to any significant extent. First, carriage of radioactive material (RAM) was regulated in Europe under the regulatory framework of the RID Convention. The International Atomic Energy Agency (IAEA) published its Recommendations on the Safe Carriage of Radioactive Materials for the first time in 1961. As we all know, these recommendations have been revised repeatedly and are to enter into force in a new, revised edition in 1996.

For other dangerous goods, the United Nations Economic and Social Council (ECOSOC) published regulations for the carriage of dangerous goods for the first time in 1956. Actually, these were recommendations rather than regulations, but directed and paved the way for all modes of transport away from the hotchpotch of regulatory frameworks for specific modes of transport.

Some contents of the UN Recommendations which have directed development should be pointed out here:

- Uniform danger labels throughout the whole world;
- Establishment of criteria for substance classification;
- Framing of tank container construction requirements;
- Allocation of a substance identification number (UN number) for every substance.

The UN Recommendations - the "Orange Book" - give rise to hope for complete harmonization of all regulations worldwide at some time in the future.

Summing up, there are two sets of recommendations regulating the worldwide carriage of dangerous goods (Orange Book) and of radioactive materials (IAEA-Recommendations).

THE IAEA REVISION PROCEDURE

About once every decade the IAEA Recommendations are revised. In the early 1990s the revision procedure to end in 1996 was begun.

Numerous meetings of Consultants Service Meetings (CSMs), Technical Committees (TCs), Revision Panels (RPs) and Standing Advisory Group on the Safe Transport of Radioactive Materials (SAGSTRAM) have brought the revision procedure far enough to permit publication of the 1996 (English language) edition in September 1996.

The task now is to transpose these IAEA Recommendations into mandatory regulations for each mode of transport. Using European rail and road transportation (ADR Agreement and RID

Convention) as an example, the diagram shows how.



Fig. 2 EU legal instruments

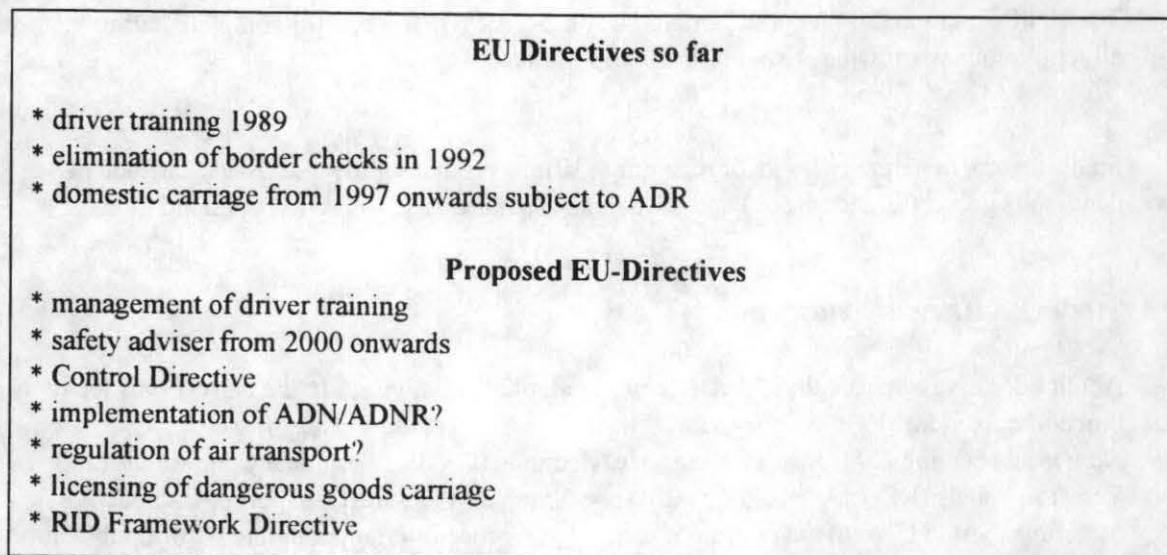


Fig. 3 EU activities

A problem here is the way the information is presented in these regulations. At present, both their structure and layout are difficult to understand, and attempts are being made to find a simplified form of presentation by means of a structural reform. In this simplified structure, all regulations are arranged in tables similar to the regulatory regime of the ICAO-Technical Instructions. Whether the new 14 Schedules of the IAEA Recommendations will fit into this system remains to be discussed.

EUROPEAN UNION

Since the beginning of 1993, 15 States of the European Union have formed a free market. Cabotage, which means that a carrier may render transportation services within another State. One precondition for this free market is that throughout the European Union domestic and transboundary carriage are governed by the same regulations and subject to the same rules for controls.

The Commission of the European Communities, Directorate General VII, considered this as another reason to issue directives for the carriage of dangerous goods. At present one directive for road transport, known as "ADR Framework Directive," has been completed. Basically, it states that international ADR regulations also apply to domestic carriage within the EU Member States. This ADR Framework Directive was promulgated in the Official Journal (OJ) of the European Communities at the end of 1994, and the Member States have to incorporate it by January 1, 1997.

Similar directives are in preparation for rail transport and shortly due for promulgation; for inland navigation the drafting of a corresponding directive is under consideration.

As soon as such a directive is published the EU Member States are no longer free to set their own rules. In addition, they may apply EU law only to their domestic transport. As far as road transport is concerned, this means:

- One ADR version (the original) for transboundary traffic comes from Geneva;
- A different EU version (translated into every EU language by the European Community) for domestic traffic comes from Brussels.

In this case, the European Commission has the task of translating the ADR into 12 languages of the EU. Of course, the same applies to rail transport and, perhaps in the future, to inland navigation.

For maritime or air carriage there are no EU activities so far.

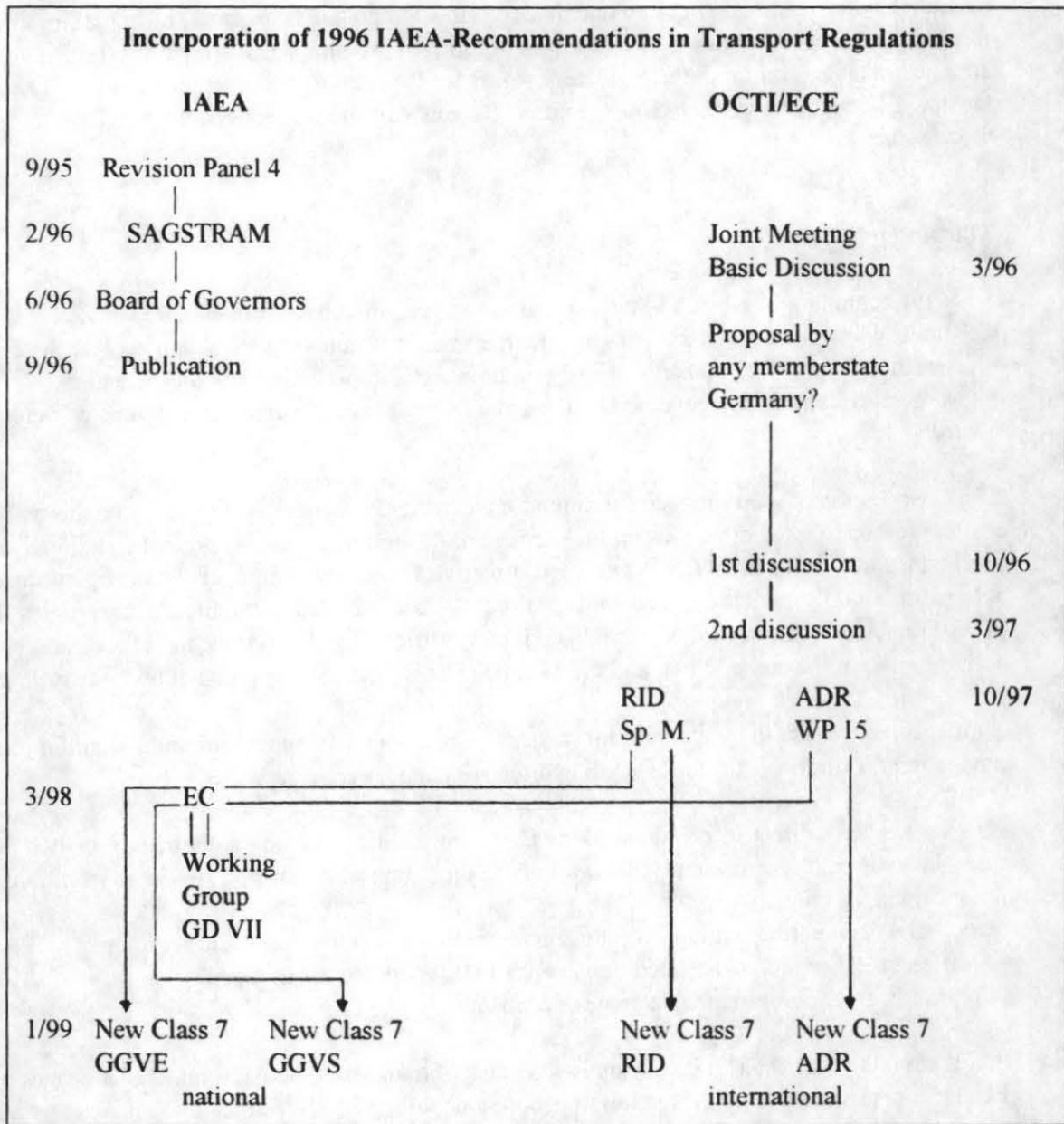


Fig. 4 Incorporation of 1996 IAEA-Recommendations in Transport Regulations

REGULATORY PROVISIONS FOR AIR AND MARITIME TRANSPORT AND INLAND NAVIGATION

Development of the air transport ICAO-TI is in the hands of the International Civil Aviation Organization (ICAO), headquartered in Montreal. The ICAO will be able to adopt the IAEA Recommendations on time on January 1, 1999, especially as its 2-year revision is due for that date anyway.

The International Maritime Organization (IMO), London, which is in charge of maritime carriage, also amends its rules every 2 years and will have no foreseeable difficulty adopting the 1996 IAEA

Recommendations for January 1, 1999.

No difficulty arises for inland navigation on the river Rhine, which is the world's busiest waterway. In this case, the provisions of the Statutory Ordinance on the Carriage of Dangerous Goods on the Rhine (ADNR) simply refer to the list of substances in the ADR. If the ADR is amended, these amendments automatically are referenced from the ADNR. However, should further rules specific to inland navigation be required, there will be ample time to incorporate them into the ADNR before January 1, 1999. At present, hardly any carriages of radioactive materials take place on the Rhine.

CONCLUDING REMARKS

It has been shown that incorporation of the 1996 Edition of IAEA's Recommendations in European and international dangerous goods law is a rather complicated matter. Implementation of these recommendations in domestic law of the EU Member States is particularly complicated. Nonetheless the competence of the European Union is a guarantee that domestic carriage in any case will be subject to the recommendations to be published in Vienna.

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