

OTIF



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standardized risk analysis
(The Hague, 19-20 June 2008)

Transmitted by the Netherlands

Introduction

At previous meetings, representatives of some Member States that have no institutionalised risk analysis of the transport of dangerous goods had indicated that they wanted to learn more about methods of quantitative risk analysis. Switzerland and the Netherlands were asked to share their knowledge of quantitative risk analysis (QRA). After Switzerland, the Netherlands was then in a position to present its knowledge and experience. Mr. Henk Langenberg of the Ministry of Transport, Public Works and Water Management chaired the meeting.

The following countries and NGOs were present: Belgium, Denmark, Germany, France, the Netherlands, Norway, Switzerland, ERA (European Railway Agency) and UIC (International Union of Railways).

Goal of the meeting

The goal of the meeting was to give other Member States the opportunity to take a look behind the scenes of QRA in the Netherlands and its external safety policy.

The first day of the meeting concentrated on the methods used in the Netherlands for QRA and the way external safety policy is handled.

For reasons of cost, only a limited number of copies of this document have been made. Delegates are asked to bring their own copies of documents to meetings. OTIF only has a small number of copies available.

On the second day the use of QRA was put into perspective by looking at its pros and cons as a part of the total external safety issue. At the same time the Netherlands showed what is gained by the use of QRA and what actions are taken to cope with some problems and disadvantages.

Presentations

Day 1

*Presentation 1 (see Annex 1): Quantitative Risk Analysis Policy in the Netherlands
by Peter Peeters from the Ministry of Transport, Public Works and Water Management*

External Safety policy could be considered as a 'swinging' policy: If calamities do not occur for a long time policy is eased, if a calamity does occur policy is sharpened. External safety policy should be more sustainable. Therefore the presence of safety risks needs to be acknowledged.

In a densely populated country like the Netherlands it is not possible to avoid external safety risks based on the effect of a possible accident. Therefore the Dutch government uses a risk approach in such a way that risks have to be reduced in a reasonable and well-considered way.

External safety in the Netherlands is all about a sustainable balance between transport and spatial planning. Therefore the Dutch government is implementing a basic transport network that has to point the way to a sustainable balance between transport and spatial planning. This Basic Transport Network has to satisfy the applicable international treaties and framework directives, and must accommodate transport of dangerous goods to and from economic (core) areas.

The Dutch policy document on the transport of dangerous goods is available by hyperlink: http://www.verkeerenwaterstaat.nl/english/Images/ENGELSE%20versie%20Nota%20VGS%20HERZIEN_tcm249-208666.pdf

*Presentation 2 (see Annex 2): Quantitative Risk Analysis in the Netherlands
by Tineke Wiersma from Public Works and Water Management*

The Netherlands uses a standardized approach which has been laid down in guidelines for QRA described in 'Publication Series on Dangerous Substances' (Publicatiereeks Gevaarlijke Stoffen: PGS 3). Free software to perform QRA's (RBM II 2005) has been made available by the Ministry of Transport, Public Work and Water Management. A large scale evaluation of the software programme was performed and as a result a new, extended version of this software programme has recently been issued.

*Presentation 3 (see Annex 3): Practical Case: Urban development and External Safety
by Ronald Kooman from the Municipality of Dordrecht*

Dordrecht is a municipality that contains a junction of different kinds of infrastructure on which dangerous goods are transported. Because of the important role of its local infrastructure in the transit of (dangerous) goods from and to Rotterdam harbour, Dordrecht has much experience in keeping a sustainable balance between external safety risks and its spatial planning ambitions.

The practical case that was presented concerned the "Leerpark", which consists of multiple educational institutions, houses and commercial properties. With the use of zoning, adjustments to the infrastructure, improving the overall safety situation (for instance accessibility for the fire brigade), and smart spatial planning, (quantitative) risks were brought to a minimum. In the future Dordrecht will also look into the possibility of a separate dedicated goods transport line avoiding the urban area (port of Rotterdam-Antwerp).

*Presentation 4 (see Annex 4): Management of QRA Instruments
by Johan Lembrechts from the National Institute for Public Health and the Environment (RIVM)*

The goal of QRA is to provide a tool that can help decide on an acceptable distance between an activity with dangerous substances and a populated area. In this process political consideration of the risks versus social benefits and costs plays an important role.

Since risk criteria obtained a more legal basis, a strong demand on the QRA instrument has developed. In 2001 the Benchmark Risk Analysis Models (2001) showed significant differences in the calculated results. It also showed that results were not transparent and therefore difficult to verify. The solution was to prescribe one software tool: RBM II.

A management structure was needed for implementation of new models required, because changes in models may have large implications. By prescribing one tool and investing in a management structure for QRA-instrumentarium, the Netherlands achieved more transparency and more consistency in calculations.

*Presentation 5 (see Annex 5): Examination by ERA
by Emmanuel Ruffin*

In his presentation Mr. Ruffin presented the process concerning the examination of requests for recommendation on safety aspects submitted to the ERA.

Day 2

*Presentation 6 (see Annex 6): QRA in perspective
by Peter Peeters from the Ministry of Transport, Public Works and Water Management*

The presentation QRA in perspective looked at the pros and cons of QRA as a part of the total external safety policy. It showed what the Dutch government has experienced in using QRA for its external safety policy. The findings that were shown in the presentation resulted from a SWOT analysis of the Dutch QRA policy, performed by external safety experts from the government, municipalities, scientific institutions and the industry.

The presentation also included some new initiatives like 'Group risk on a map' to support the spatial planning process and plans for a national population database to provide better and consistent input of population data used for QRA.

Conclusions and remarks

QRA can be an important supporting tool for decision making when it comes to risks versus spatial planning, social benefits and costs. However, models alone do not automatically lead to the best and most logical solution for an external safety problem. The Dutch government is continuously in search of more instruments and measures to improve the external safety. For example bringing a stop to structural transport movements of chlorine by moving the production activities from one location to another.

It is also important to recognize that external safety policy and the use of QRA will differ between different countries, simply because every country has its own specific external safety situations. In a densely populated country like the Netherlands choices have to be made in use of available 'expensive' space. That is why QRA in the Netherlands has become a vital supporting tool in this process. This doesn't automatically mean that QRA is absolutely necessary in other countries, with different population densities and their own specific external safety problems. In the end a decision made in spatial development and transport of dangerous goods, concerning (external) safety will be a political one.