



**Convention on the Protection and Use of Transboundary
Watercourses and International Lakes**

Working Group on Monitoring and Assessment

Third meeting

Helsinki, 3-5 October 2002

WGMA/2002/11

**UPDATE ON THE RAPID ENVIRONMENT AND HEALTH RISK ASSESSMENT
PROJECT - As of September 2002**

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Development of Rapid Environment and Health Risk Assessment (REHRA) methodology was endorsed by the extraordinary meeting of the European Environment and Health Committee held in Vienna in April 2000 triggered by the industrial accident in Baia Mare earlier in the year. The aim of the methodology was: (a) to identify the worst-case scenario in the face of a severe accident at an industrial site with a massive release in the environment of dangerous substances or energy (heat radiation, explosion waves); and (b) to help prevent, monitor, and manage risks and related foreseeable emergencies for the protection of the health and the environment.

Funded solely by the Italian Ministry for the Environment and Territory, the pilot implementation of REHRA was carried out in three countries of the Danube basin: Bulgaria, Hungary, and Romania. Following the completion of the implementation of REHRA methodology in Bulgaria in December last year, implementations in Hungary and Romania have also been concluded. The final reports include organized databases containing information, data, mapping and results.

The REHRA methodology allowed the countries to achieve the following:

1. Ranking of hazardous industrial sites
2. Estimation of gravity of industrial accidents
3. Final risk ranking of industrial sites
4. Identification of possible prevention and emergency measures to reduce the risk at each participating industrial site

The methodology has its own strengths, particularly in its nature of rapidity that assesses risks to the environment and to human health. The activities under the pilot phase has not only proven the effectiveness and reliability of the methodology in assessing the environment and health risks at the event of severe industrial accidents but also confirmed the potentiality of the methodology in drawing an external emergency plan in compliance with EU accession requirements and in adhering to the EU Environmental Impact Assessment Directive in a more time-efficient manner than with other assessment methods.

During the project phase, the technical team had constantly been developing some new functions to enhance the capability of REHRA. Also, ideas and needs had been communicated to the team by the industries and other stakeholders. Earlier this year, a request was made by one of the participating industries in Romania, one of the most important crude processing and petrochemical

companies of the country, to develop an additional detailed analysis on toxic dispersions following releases of ammonia and acrylonitrile.

The comparative analysis was conducted with the following purposes:

- To compare the results of REHRA with those of a detailed analysis
- To compose a detailed picture of the accident scenario in order to gain useful elements for external emergency planning
- To analyze the best application of REHRA and a detailed method at a site

The case study suggests that calculated damage distances from two methodologies are comparable and a sequential application of two methodologies appear to be very useful. As REHRA requires a smaller set of information, it would be an efficient tool for the initial identification and ranking of the risk at the national or regional level. For the most critical areas of risk identified by REHRA, a detailed analysis can be applied in order to define the possible origination of accidents and their potential impact outside of the plant. In short, REHRA can give information for provisional external emergency plans which can then be refined by a more detailed analysis, which is more time consuming, where necessary.

The Bulgarian and Romanian governments expressed their appreciation for REHRA and are planning to further apply the methodology at other industrial sites of the countries. Further, the methodology has already attracted the interest of a number of experts in the similar field outside of the pilot countries. Through presentations at various international meetings, the software has been distributed to those who were interested.

Particularly to note is that REHRA was approved as Type II Initiative at the recent Johannesburg Summit, with which the Italian Ministry for the Environment and Territory further extends the cooperation with other partners. A partner from the Slovak Republic will be joining in the new phase of the project under the framework of the Initiative. One of the most important applications will be to the hot spots of the Mediterranean region with the main goal of developing a specific methodology to target primarily the immediate and acute consequences of sudden accidents of spills of oil and/or dangerous substances from ships during navigation and the operations in the ports.

Further information is available from:

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