Environmental Engineering and Management Journal, September 2002, Vol.1, No.2, 231-241
http://omicron.ch.tuiasi.ro/EEMJ/

"Gh. Asachi" Technical University of Iasi, Romania

RISK MANAGEMENT: LAND-USE PLANNING UNDER EUROPEAN APPROACH

Maria Gavrilescu

Technical University Iasi, Department of Environmental Engineering
Mangeron Street 71A, 6600-Iasi, Romania, e-mail: mgav@ch.tuiasi.ro

Abstract

The paper discusses several requirements of the Seveso II Directive with respect to major accident hazard in connection with the procedures, approaches and criteria for the acceptability of hazards or risk in various European Member States. In the European environment there are countries that have already established well-structured procedures for taking major accident hazards into account in land-use planning, and countries in which such procedures are under development, in view of the Seveso II Directive requirements.
The paper reviews the methodological framework possible to be applied at a regional and local level, for the operators of the plants and the planning authorities to take into account the major accident hazards in the land-use planning procedure, for risk reduction with simultaneous increase of the benefit from exploitation of land.
The approaches followed in EU countries, analyzed in this paper, are grouped into in three broad categories:

- the determination and use of 'generic' separation distances, depending on the type of activity rather than on a detailed analysis of the specific site;
- the consequence-based approach, which focuses on the assessment of consequences of a number of conceivable scenarios (reference scenarios);
- the risk-based approach, which focuses on the assessment of both consequences and probabilities of occurrence of the possible accident scenarios.

Furthermore, the paper discusses the application of this methodology in case studies: illustrative examples to facilitate understanding and comparison of the analyzed approaches and land-use planning in the vicinity of chemical sites. The proposed approaches give the possibility to the local planners to deal with various concerns of a local character and produce meaningful results, but the final decision remains always with the Decision Maker(s).

Keywords: hazard, risk, land-use planning, separation distances, consequence-based, assessment, management, site