



## **Proposal of the methodology for combined natural and technological risks identification and assesment**

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One from important problems in the major accident prevention and preparedness are combined natural and technological risks, often in the form of technological accidents triggered by natural phenomena. The goal of presented work was to propose the methodology applicable for the assessment of such events.

Flow of energy, material and information is the principle of mutual interactions among different types of risks occurring at major accidents. According to complexity of real phenomena during these unwanted situations, many combined natural and technological risks could be identified. Large effort and energy were spent on solving of the problem of combined risk assessment, including the series of case studies on different types of various risks combinations around the world.

Combined risks represent different level of threat for human, property and often also for various compartments of the environment. In the contrary to combined risks, for the occurrence prediction and effect estimation of single risks, many methodologies and models are available. Proposed methodology aims to establish basis for identification and assesment of certain combined risks, including so called „NATECH“risks. During development of methodology, combined risks were studied on historical events by means of several approaches.

Proposed methodology is divided into 10 separated steps, which are furthermore briefly described, including links to related information resources and recommendations of applicable methods for several steps. Proposal of methodology is oriented mainly on vulnerabilities in the potentially evaluated areas. In the methodology were integrated several approaches and experiences developed mainly in European region in past decade.

Application of proposed methodology assumes the organization of multidisciplinary oriented team of experts, according to selected combination of natural and technological risks. In the frame of specific application, experts have the high degree of freedom in the choice of analytical approaches for single risk.

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