

NoMiracle

NoMiracle, an integrated European research project, will develop novel methods and tools to better evaluate chemical risks.

Integrated Project of the European Commission "Novel Methods for Integrated Risk Assessment of Cumulative Stressors in Europe"

Brief description

Background

Due to industrial and technical development humans and their environment are exposed apart from natural to multiple anthropogenic stressors caused by pollutants, radiation and noise. Central and long-term effects of these expositions individually and in combination are often not clarified. The project NoMiracle will develop methods which measure **cumulative risks** from complex mixtures of chemical, physical and biological agents.

Effects of cumulative stressors are quantified and described temporally, spatially and materially. Apart from the **integrative risk assessment** of anthropogenic caused expositions also the interaction of natural factors are included such as the effects of the climate. By using improved assessment tools and novel models the project will quantify and reduce the uncertainty in the risk assessment. The results can be used as a scientific basis for the definition of setting safety factors.

Objectives

- To develop new methods for assessing the cumulative risks from combined exposures to several stressors
- To achieve more effective integration of the risk analysis of environmental and human health effects
- To improve our understanding of complex exposure situations and develop adequate tools for sound exposure assessment
- To develop a research framework for the description and interpretation of cumulative exposure and effect
- To quantify, characterise and reduce uncertainty in current risk assessment methodologies
- To develop assessment methods which take into account geographical, ecological, social and cultural differences in risk concepts and risk perceptions across Europe
- To improve the provisions for the application of the precautionary principle and to promote its operational integration

Project Consortium and Design

The Integrated Project includes 38 partners from 18 EU member countries, including six small and medium-sized enterprises. The project partners bring in their expertise into five different research and management tasks. The work packages are:

1. Risk Scenarios
2. Sound Exposure
3. Effect Assessment
4. Risk Assessment
5. Management of the Project

Contribution of DIALOGIK

The two main tasks of DIALOGIK are in work package 4 "Risk Assessment"

- Review the theoretical and applied frameworks and methods in the areas "risk perception, knowledge and uncertainty" and "policy aspects in risk assessment" to make the results operational for the NOMIRACLE project, including communicative, quantitative and visual models for comparative and cumulative risk assessment
- Identify useful approaches for risk and uncertainty analysis and the use and quality assurances of these approaches.

Furthermore, DIALOGIK will provide training courses and summer schools on the topics of *Cumulative Risk Management* and *Multicriteria Ranking for Decision Making*. Target groups are risk managers and risk regulators in small and medium-sized enterprises, industry and NGOs.

Further Information: <http://nomiracle.jrc.ec.europa.eu/de>

Duration

01.11.2004 - 31.10.2009

Coordination of the project

Dr. Hans Løkke from the National Environmental Research Institute, University of Aarhus (AU), Denmark

Coordination of the subproject 4: Dr. A.M.J. Ragas from the Radboud University Nijmegen, Netherlands.

Coordination of the subproject 4.3: Prof. Mikael Hilden, Finish Environment Institute (SYKE) in Helsinki, Finland

Contribution of DIALOGIK

Coordination and project leader of DIALOGIKs part in subproject 4.3: Prof. Ortwin Renn
Researcher in subproject 4.3: Christina Benighaus, Dipl. Geogr.