

MOKKA

Modern engineering tools for environmental risk management

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Abstract

MOKKA is a Hungarian Research and Development Project with 8 Hungarian and 2 European participants. The project is running between 2005 and 2008, financed by the Hungarian National Research Fund.

The main goal of the project is to develop missing engineering tools to support environmental risk management of contaminated sites. The following methodologies have priority in our developments: innovative site assessment and monitoring tools, modeling, integrated evaluation of physicochemical, biological and environmental toxicological results, development of risk assessment methodologies as interpretation tools for site assessment and monitoring, innovative remediation methods, like natural attenuation, enhanced natural attenuation and other nature-based soft technologies.

The project tries to fill in some of the existing methodological gaps with the development of testing methods applicable for the availability, bioavailability, mobility, biodegradability, bioaccumulation potential, toxicity, mutagenity of the pollutants and polluted environmental elements. These results are integrated into an enhanced risk assessment procedure.

Some innovative tools, like QSAR and modeling, management of diffuse pollution sources, sustainable remediation and remediation technology verification have also got priority.

Besides the developments of assessment and remediation tools, a further aim of the project was the collection of traditional and innovative assessment and remediation tools into a complex database. The database has four large sub-databases: 1. Physico-chemical analytical methods for site assessment, 2. Environmental toxicity testing and biological assessment methods, 3. Modeling; 4. Remediation technologies.

Some smaller information-packages are also available like, Hungarian legal background, risk assessment methodologies, Hungarian projects on contaminated site remediation.

The database is complemented with decision support tools, which help the end-users to find the proper information.

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