

**9th INTERNATIONAL FZK/TNO
CONFERENCE ON CONTAMINATED
SOIL-WATER SYSTEMS
(ConSoil 2005)**

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ConSoil is the leading European conference on soil and (ground) water systems. It links science with applied technology and implementation in practice, and is concerned by the problems that uncontrolled soil pollution can cause.

The 9th International FZK/TNO conference on contaminated soil-water systems (ConSoil 2005) was held on 3-7 October, 2005, in Bordeaux, France. About eight hundred participants from different countries attended this conference.

The ConSoil 2005 programme included:

- * 40 Lecture Sessions (LeS) with about 150 oral presentations.
- * 30 Special Sessions (Sps).
- * 5 Country Sessions (Cys).
- * US Environmental Protection Agency Technical Sessions.
- * About 300 Posters.

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LECTURE SESSIONS (LeS)

The lecture sessions (LeS) includes 4 oral presentations :

Theme A : Policies and Soil-Water Systems:

LeS A. 1: EU Policy on contaminated land management.

LeS A. 2: Policy performance and stakeholders participation.

LeS A. 3: Soil quality objectives.

LeS A. 4: Risk management remediation strategy.

The most important presentation in Theme A were:

1. Health risk analysis associated with contaminated sites: Italian guidelines.
2. Development concentration levels of metal and other elements in soils protective for human health and ecosystems in Catalonia (Spain).

Theme B: Function and Values of Soil-Water Systems Understanding of Processes

LeS B. 1: Sediments and river systems.

LeS B. 2: Models and experiments.

LeS B. 3: Land use related aspects.

LeS B. 4: Groundwater - 1.

LeS B. 5: Groundwater - 2.

The most important presentation in Theme B were:

1. Investigation of contamination sources in the Ebro river basin using chemometrics methods.
2. The threat from the diffuse reservoir of heavy metals, PAH and other persistent pollutants in the urban soil environment.

Theme C: Site Characterisation and Risk Assessment

LeS C. 1: Site characterisation and sampling - 1.

LeS C. 2: Site characterisation and sampling - 2.

LeS C. 3: Diagnostic tools: biotools.

LeS C. 4: Diagnostic tools: isotope geochemistry.

LeS C. 5: Environmental impact.

LeS C. 6: Bioavailability and impact analysis.

LeS C. 7: Health risk - inorganics.

LeS C. 8: Health risk - VOC and organics.

LeS C. 9: Health risk - models and uncertainties.

LeS C. 10: Pollution transfer and modelling - forensic methods.

LeS C. 11: Pollution transfer and modelling - ground water.

The most important presentation in Theme C were:

1. Impact of sampling tools used for measurement of PAH's in groundwater.
2. Site assessment and accelerated feasibility study for clean-up of the former union carbide pesticides plant at Bhopal, India.
3. Application of compound-specific stable carbon and hydrogen isotope analysis to characterize organic contamination of ground water.
4. Exposure of children to heavy metals in the vicinity of a polluted industrial environment: contamination of hands by dust.
5. Cadmium, lead and zinc concentrations in soil and vegetables from kitchen gardens in Urban and highly-contaminated areas of northern France: Evaluation of the risk of population exposure.
6. Site specific risk assessment of volatile compounds in soil: How it can be improved.

7. Consideration of toxic metabolites from explosives and chemical warfare agents on polluted military and armament sites for health risk assessments.

Theme D: Remediation Concepts and Technologies

- LeS D. 1: Enhanced natural attenuation.
- LeS D. 2: Monitored natural attenuation - 1.
- LeS D. 3: Monitored natural attenuation - 2.
- LeS D. 4: Monitored natural attenuation - 3.
- LeS D. 5: Permeable reactive barriers - 1.
- LeS D. 6: Permeable reactive barriers - 2.
- LeS D. 7: Permeable reactive barriers - 3.
- LeS D. 8: Phytoremediation.
- LeS D. 9: Source treatment - Thermal.
- LeS D. 10: Source treatment - in situ chemical oxidation.
- LeS D. 11: Source treatment - (micro) biological aspects.
- LeS D. 12: Source treatment - physico-chemical.
- LeS D. 13: Soil treatment and other brand new ideas.

The most important presentation in Theme D were:

1. Is monitored natural attenuation (MNA) a remediation option at sites contaminated with chlorinated volatile organic compounds?
2. Nature attenuation of the hexachlorocyclohexane isomers (HCH) in groundwater. A case study.

Theme E: Risk Based Land Management

- LeS E. 1: Urban environment.
- LeS E. 2: Water resources.

LeS E. 3: Decision making.

Theme F: Complete Cases

LeS F. 1: Mining and related cases.

LeS F. 2: Urban areas.

LeS F. 3: Megasites and brownfields.

Theme G: Contaminants

LeS G. 1: MTBE.

LeS G. 2: Other contaminants.

The most interesting presentation in Theme E, F and G were:

1. Determination of the benzimidazole parasiticides in soil sediment and water.
2. Simultaneous determination of MTBE, its degradation products and other gasoline additives in soil samples by closed system P and T. GC/MS.
3. Environmental risk management of mining sites with diffuse pollution.

SPECIAL SESSIONS (SpS)

In these sessions specific topic, project or organization, are included:

- * Integrated management of soil and water quality and sustainable re-development of megasites.
- * Monitoring in the perspectives of microbiology, modelling and field experiments.
- * International research cooperation to develop and evaluate tools and techniques for revitalization of potentially contaminated sites.
- * Developments in bioaccessibility measurement and its application in human health risk assessment.

- * Contribution of major sites remediation on the technical practices concerning contaminated soil and groundwater.
- * Assessment of materials, soils and groundwater.
- * Groundwater monitoring: why and how?
- * Management of sites contaminated by radionuclides; technical basis and regulatory practices.
- * Management of mine tailings in Europe.
- * A comparison between the Chinese and the European soil strategy, with the emphasis on polluted sites.

COUNTRY SESSIONS (CyS)

It included five country sessions at which representatives of different countries highlight developments of specific importance to their countries or regions (France, Germany, Flanders, United Kingdom and the Netherlands), The main basic principles were:

- * Prevention of pollution.
- * Perspectives of the soil and water market - a glance into the future.
- * A coherent vision for the future development of brownfield land, the ultimate recycling policy.
- * Cooperation: key in the drive for clean soil.

U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA) TECHNICAL SESSIONS:

It included:

- Introduction to the triad and mechanics of systematic planning.
- Sample design and quality assurance practices for triad investigations.
- Data and project management and managing a dynamic plan in the field.

- Detailed case studies of triad applications at hazardous waste sites.
- U.S./European discussion panel: Experience with and potential for application of triad in European cleanup programs.
- U.S. information resources supporting innovative monitoring and measurement approaches.

POSTERS

The main subjects of the three hundreds posters were:

- Policies on soil-water systems.
- Functions and values of soil-water systems; understanding processes.
- Mobility-transport-transfer.
- Site characterisation and risk assessment.
- Mobility transport.
- Ecological risks.
- Bioavailability-biodegradation.
- Remediation concepts and technologies.
- Biodegradation-natural attenuation.
- Physico-chemical methods.
- Risk based land management.
- Complete cases.
- Contaminants.

MAIN ISSUES ARISED DURING CONSOIL 2005

1. Exchange of experiences.
2. Harmonisation of the scientific basis, basis on risk assessment.
3. Increasing public awareness.
4. Future development of policy.
5. Future scientific work.
6. Integration.

As the department of environmental research at the National Center for Social and Criminological Research is concerned with the environment pollutant which are either organic or inorganic and their effects on human; I think that the 9th International FZK/TNO conference on contaminated soil water systems which deals mainly with the problems of uncontrolled soil pollution is very important, because it provides the latest information about soil and ground water pollution and their pollutants, the method of their extraction, clean up and detection.

Moreover the conference is an appportunity to exchange experinces especially in subjects related to new techniques for the detection and prevention of contaminated soil.