



# 1<sup>st</sup> Coordinated call

Introduction on the call agenda

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## Scope coordinated call

- **No common agenda**
- **Overlap in national research items**
- **Agenda EU-soil strategy as a framework**

# Match met EU-soil strategy

Processes underlying soil functions and quality	Spatial and temporal changes of soil processes and parameters	Ecological, economic and social drivers of soil threats	Factors influencing soil eco-services	Strategies and operational procedures for soil protection
1 sources, fate and behavior of pollutants	2 development of fast and cost effective screening methods	7 harmonization of methodologies for the identification and quantification of potentially dangerous chemicals	9 improvement and harmonization of concepts and models for the transport of contaminants in soil and their transfer to other environmental compartments (water, air, biomass)	13 improvement of soil functions, contributing to natural attenuation
	3 identification and quantification of new hazardous substances in soils	8 identification and quantification of social and economic driving forces on local and diffuse soil pollution and their impacts	10 development of concepts and models for the direct and indirect transfer of contaminants from soil to humans	14 quantification and improvement of natural rehabilitation processes
	4 early warning systems for soil pollution, including bioindicators		11 improvement of risk assessment methodologies for remediation activities, with the final aim of developing a "fit-for-use" toolbox for risk-modelling, including the re-use of decontaminated soil	15 improvement of methods for alternative management options, taking into account environmental, social and economic conditions
	5 definition of indicators for the assessment of soil quality		12 development of harmonized methods for defining "tolerable" loading on soil and groundwater systems	16 development of techniques, e.g. containment devices for safe storage, handling and transport of harmful substances
	6 mobility and availability of contaminants to other environmental compartments			17 sustainability/persistence of remediation technologies and their environmental impacts
				18 economic models for assessing the cost-benefit relationship for cleaning-up methods of contaminated soils

## Research areas

- Risk based land management
- Water system quality management
- Implementation of Natural Attenuation

## Scope of first call

- **Soil system processes**
- **Sustainable land management approaches**
- **Toolbox for sustainable land management approaches**

# Soil system processes

- **Sources, fate and behaviour of diffuse pollutants:**
  - Interaction between pollutants
  - Multi phase transport processes
  - Spatial and temporal changes in processes
  - Uncertainty and risk assessment
- **Mobility and availability of contaminants to other environmental compartments:**
  - Bio availability
  - Transfer mechanisms
  - Impact on crop, livestock, animals etc. **(JUVENATE)**

# Sustainable land management approaches

- Understanding of impacts on soil functions, land use, and ecosystems;
- Natural rehabilitation processes:
  - Knowledge of natural attenuation **(ENACT)**
  - Risk communication
- Sustainability of rehabilitation approaches
- Development of new approaches taking into account environmental, social and economic conditions:
  - Development of models
  - Ecological risk assessment **(MUSA)**
  - Strategies and procedures **(IOPSIM)**

# Toolbox for sustainable land management approaches

- Improvement and harmonization of models for:
  - transport and transfer of pollutants  
(**PERSPEC**)
  - degradation and modification of pollutants
  - soil quality assessment (**SUMATECS**)
  - remediation

# Selected projects

- **ENACT**: Extending the Natural Attenuation of Chlorinated solvents  
Toolbox
- **IOPSIM**: (Im)mobilization of organic pollutants by soil constituents  
in the soil/groundwater system - Strategies for innovative  
management
- **MUSA**: Integrating Multiple Scale Assessment on Eco-systems for  
Contaminated Land Management
- **PERSPEC**: Perspectives on mobilisation of prioritised contaminants  
in soil
- **SUMATECS**: Sustainable management of trace element  
contaminated soils - Development of a decision tool system and its  
evaluation for practical application
- **REJUVENATE**: Non-food crop production and organic matter reuse  
on marginal land