

AquaConSoil



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- 1 Vital and resilient soil-sediment-water systems**
- 2 Smart solutions for urbanizing areas of the world**
- 3 Smart tools and methods to connect people, planet and profit**
- 4 Integrated management of contaminated land**
- 5 Sustainable remediation technologies in context of the EGD and energy transition**

Special Session 1aSpS1: NICOLE session 1. Land Stewardship

Special Session 1aSpS2 Soil Mission Support: Co-creating the European Roadmap for Land and Soil Related Research and Innovation

Session 1b1 Approaches session 1b1 sustainable water re-use in urban areas

No_ID AquaConnect
50935 Developing Effective Waste and
Wastewater Circularity in Smart
Municipalities
50256 Management approaches of nature-
based solutions using soil to attenuate
nutrients and contaminants of
emerging concern
50997 Integrated regional program for
deep urban groundwater quality
management in Jurubatuba, Sao Paulo,
Brazil.

Session 1b2 Approaches to sediment reclamation and reuse

49824 Pilottest PFAS treatment in
discharge water of IJsseloo, one of
the three state sludge depot in the
Netherlands
49360 Definition of geochemical
background values over the Parisian
Basin to promote the circular reuse of
excavated soils: the GeoBaPa project
50086 Minimizing sustainability impacts
throughout dredging project – from
decision making to stabilization
50136 Sustainable sediment management
in coastal infrastructures through the
innovative ejectors plant technology

Special Session 1cSpS1 TerrAgenda: A Manifest for healthy soils in 2030!

Session 2a1 Phytoremediation

49893 Feasibility testing and
implementation of pilot experiments
for phytoremediation within Life
NARMENA.
49241 Case study of land reclaim by
phytoremediation: from TPH
contamination to potential agricultural
value
48851 The Power of Constructed Wetlands
to clean water from nutrients and
PFAS
49262 Recovery of rare earth elements
from mine tailings: using
hyperaccumulating plant ash to
produce a high-purity compound.

Session 2c1 Resource quality in sustainable, circular agriculture

50098 Better use of clay for sandy soils
49326 SoSEAL seepage screens, a nature-
based solution for protection of
drought-sensitive natural areas
49820 Agronomic and environmental
effectiveness of nutrients recovered
from a wastewater treatment plant in
fertigated horticultural crops.
50278 Human biomonitoring surveys on
adult populations exposed to
contaminated soils (Pb, Cd, As), focus
on health risks due to urban food
production.

Special Session 3aSpS1: Give Soils a Voice!

Incl.
50243 Engaging in alternative
communication to approach land
protection: examples of projects
between artists and scientists

Special Session 3aSpS2: An 'alternative' soil strategy by young professionals

Special Session 3aSpS3: NICOLE session 2. Liability transfer

Special Session 3cSpS1: SuRF-UK new practical guidance and tools

Special Session 3cSpS2: Sustainability assessment as a tool for more sustainable and resilient remediation of soils, groundwater, and sediments

Session 3c1 Integrating digital solutions for sustainable land management

49634 BIM for Environment – towards a
site digital twin
49636 Give the people what they want:
Insights into stakeholder needs and
opportunities for digital decision
support for brownfield
redevelopment.
50011 Example of a cloud solution for
seamless follow up of a sustainable
remediation at an oil terminal site
50109 Including the subsurface in spatial
planning

Session 3c2 Decision support tools for soil and groundwater

48963 Are we on the brink of a resurgence
of decision support tools for
brownfield redevelopment?
49679 Tools for quantification of the
duration and effect of pesticides to
groundwater resources
49803 Assessment tool for the metal
pollution present in soil and
groundwater in the Belgian Campine
area
50187 SANISOL: a web tool to provide
recommendations for users of trace
metal contaminated vegetable
gardens in Wallonia (Belgium)

Special Session 4aSp1 Industry perspectives on incorporating sustainability into portfolio-scale management of contaminated land: A panel discussion

Special Session 4aSp2 Natural Source Zone Depletion (NSZD): From principles to effective implementation

Session 4a1 Dealing with multiple pathways and scales

50063 Does unplanned water reuse for
maize irrigation pose a threat?
50071 From the pilot to the full-scale
intervention: 3d dynamic model
guiding the remediation strategy of a
polluted industrial site
50988 Leveraging PRISM™ to Assess
Contaminant Migration Pathways at a
Complex Geologic Site, Washington DC
49801 Contaminants of emerging concern
reuse of sediment

Session 4b1 Area-based risk approaches, uncertainties and scales of pollution pathways

48739 Evaluation of soil health in response
to emerging contaminants exposure
49670 To remediate or not: ecosystem
responses in a heavy-metal
contaminated natural area
49946 Detailed Assessment of Risks to
Human Health from Arsenic at a
former Colliery and Coking Works Site
48614 Study on the sorption of
Oxygenated Polycyclic Aromatic
Compounds onto soil: towards a
better human health risk-oriented
remediation of PAH-contaminated
sites

Session 4c1 Upgrading polluted sites: tackling sites with emergent & conventional contaminants (PFAS, Hg and As)

49270 Testing PFAS immobilization
49810 TCH removes PFAS from soil – but
where does it go? Removal and fate of
PFAS during thermal soil remediation
50247 Remediation of persistent arsenic
groundwater contamination in a
fractured rock aquifer in a coastal area
by using IEG-GCW™ Groundwater
Circulation
49933 Progress in the management and
securing of mercury-polluted sites

Session 4c2 Upgrading polluted sites: tackling sites with complex mixtures and conventional contaminants (HM, TPH, PAHs, Mineral oil)

49672 Planning for flexibility: a case study in
creating robust remediation designs that can
handle the realities onsite
49814 From site closure to a clean platform ready
for redevelopment: the successful and
sustainable remediation of a large industrial
site in eastern France
49674 A circular pathway within the wine
production sector towards safely treating
petroleum-contaminated soils
49763 Conventional and innovative heating
techniques for the remediation of
petroleum hydrocarbon contaminated
marine sediments from Augusta Bay (Sicily,
Italy)

Session 4c3 Upgrading polluted sites: tackling sites contaminated with pesticides

48980 Directional Groundwater
Recirculation Combined with Oxidative
Biodegradation for the Remediation of
Groundwater Contamination with
Benzothiazoles and Biocides
50246 Remediation of trifluralin polluted
soil by cold atmospheric plasma in a
novel cylinder-to-cylindrical grid DBD
reactor
49834 Green remediation of pesticide-
impacted soils during conversion of
agricultural land to residential land use
50163 Biodegradation study of bromoxynil
in two German soils

Session 4c4 Tackling sites impacted by groundwater contamination

49413 1,4-Dioxane - A contaminant of
emerging concern at contaminated
sites in Sweden?
49883 Safeguarding drinking water
resources: engineering niches of
microbial activity for organic
micropollutant biodegradation
50020 Green solutions for treating nitrate
and micropollutants in groundwater to
meet drinking standards
48895 Biological degradation of high
concentrations of 2,4- and 2,6-DNT

Special Session 4cSp1 PFAS – Best practices on the interface between soil/sediments and excavated materials which are becoming waste

Special Session 4cSp2 Inspiration from Dutch soil by Lean Start-Up

Special Session 5aSpS1 NICOLE session 3. Emerging contaminants in groundwater

Session 5a1 Enhanced bioremediation

48123 In-situ biostimulation of nitrate-
reducing aromatic-hydrocarbon-
degrading microbial communities
51408 Improvement of bioaugmentation
and biostimulation techniques for the
biodegradation of hydrocarbons in
contaminated soils
50185 Advances in Enhanced Anaerobic
Bioremediation of Recalcitrant
Chemicals
47848 DCE Stall – Causes and Cures.

Session 5a2 Zero Valent Iron (ZVI)

48855 Implementation and Performance of
Injected ZVI PRB to Control
Chlorinated Hydrocarbon Plume
Migration in Denmark
48954 Sulfidation disproportionately
influences the removal of chlorinated
ethenes by zero-valent iron
nanoparticles
49086 Innovative ZVI application for
sustainable remediation of chlorinated
solvent plumes
49192 Evaluation of 5 years operation of a
funnel and ZVI gate system for a
containment of a VOC's and Chromium
VI contamination

Session 5a3 PFAS: solutions for impacted waste water, session 1

48625 Field pilot tests of a novel material
for the in situ remediation of a PFAS
contaminated groundwater aquifer
48932 Electrosorption of perfluoroalkyl
acids on activated carbon:
accumulation of the compounds and
on-site regeneration of activated
carbon
49005 Surface Active Foam Fractionation
(SAFF): Effective PFAS removal from
water using only air
49960 Six Pilot-Scale Studies Evaluating the
In-Situ Treatment of PFAS in
Groundwater

Session 5a4 PFAS: as an emerging issue, session 2

49950 A study on PFAS in consumer
products, recycling processes, dust
and sludge
50025 PFASs in Landfill Leachate and
Wastewater – Prevalence, Context and
Solutions
48742 Precursors!
50030 Supporting a Clean, Effective
Transition to PFAS-Free Firefighting
Foams

Session 5a5 In Situ Source Zone Remediation, Session 1

48615 "Zero energy soil remediation:
recovery of free product using solar
and wind energy"
49515 Direct Comparison of Competing
ISTR Extraction Strategies
48896 Electrokinetic-enhanced
bioremediation: applications in
physically heterogeneous settings
49349 Electrokinetic bioremediation of
chlorinated solvents in groundwater:
novel insights from multiphysics
process-based models and real-time
machine learning simulations

Session 5a6 In Situ Source Zone Remediation, surfactant & ISCO focus, Session 2

49611 Influence of surfactant on dnapi
mobilization
49102 Surfactant Enhanced Extraction of
NAPL, Globule, and Sorbed Phase
Contamination Resolving Limitations
To Contaminant Availability
50936 Evaluation of Surfactants and
Surfactant-Enhanced ISCO for NAPL
Remediation at the Kaergaard
Plantation Megasite
49637 Surfactant-Supported In-Situ
Oxidation for the Remediation of
DNAPL-Groundwater contaminations

Session 5a7 Mitigation migration risk

48483 Subaqueous sediment remediation
with a permeable active geocomposite
in Sydney/Australia
47679 Reactive mat on river bed passively
catches groundwater contaminants
50026 Sheen Management via Oleophilic
Bio-Barrier (OBB) – Technology
Overview and Case Studies
49168 Contaminated Soil Capping – Risk-
Based Approach for the
Redevelopment of the Pharmaceutical
Site under the Specific Site Conditions:
Case study

Session 5b1 Innovative approaches for assessing the evolution of contamination

50987 Application of natural source zone depletion (nszd)
to a site impacted by petroleum hydrocarbons using
multiple lines of evidence
48491 New experiments about the effect of
groundwater fluctuations on the multiphase
mobilization of LNAPL contaminants: assessment
and monitoring
49607 Demonstration of an Innovative Solution For
Groundwater Characterization And Monitoring on
Industrial Site.
49994 Natural Source Zone Depletion: The Basis for a
New Approach to Manage LNAPL Contaminated
Sites

Session 5b2 Transport and biodegradation of organic contaminants

50229 Characterization and carbon and chlorine isotope
fractionation pattern of a novel trichloromethane
respiring bacterium belonging to the genus
Dehalobacter
49214 Longtime monitoring of biogeochemical changes in
situ remediation of chlorinated solvents
49784 Estimation of Sorbed-Phase Biodegradation Rate in
Activated Carbon Barriers Using Microbial
Diagnostics: C3IA and In Situ Microcosms
50262 What Your Bugs are Trying to Tell You: Illuminating
Subsurface Conditions by using Microbial
Communities as Biosensors

Session 5b3 Digital tools for site characterization and assessment

48927 The GroundWater Spatiotemporal
Data Analysis Tool (GWSDAT): What
are the latest developments?
50031 Application of digital technologies
for site walkovers
50034 Applications of Machine Learning to
release value from historical data

Session 5b4 Modelling and Monitoring for the management of contaminated sites

50072 Validation of Combined Geophysical
and Geochemical Screening Tools to
Locate and Delineate Subsoil DNAPL
Hotspots in Multi-Layer Soil Profiles.
49907 Modelling the thermal desorption
soil treatment
49992 Advantages of Passive Sampling as a
Decision-Making Tool and its
Application to Contaminated
Groundwater Upwelling
50284 Evaluation of High Resolution
Methods for VOC Contaminant and
Flux Distributions in Igneous /
Metamorphic Rock Settings