# NICOLE

Network for Industrially Contaminated Land in Europe

### **Program NICOLE workshop**

# Implementation of Sustainability in Management of Contaminated Land – in particular using emerging 'green' technologies

NICOLE Network meeting & workshop Lisbon, 12-14 June 2013

### Introduction

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NICOLE has described a sustainable remediation project as one that represents the best solution when considering environmental, social as well as economic factors – as agreed by the stakeholders. This debate has been the subject of several meetings and special sessions, e.g. during the NICOLE workshop held in Leuven, Belgium, 4-5 June 2009, 'Sustainable remediation – A solution to an unsustainable past?'. NICOLE would like to facilitate a shift in this discussion towards practical implementation. Moreover, NICOLE wants to promote a common understanding for *Sustainability in Management of Contaminated Land*, which includes popular terms like '*Green Remediation*' and '*Green Technologies*'.

The NICOLE Spring Workshop 2013 aims at showing examples and experiences on how contaminated sites can be remediated eco-efficiently, leaving a smaller environmental footprint, and how their reuse can contribute to a more sustainable development. This encompasses both approaches to deployment and decision-making, and technologies. In addition, intrinsically eco-friendly, eco-efficient techniques have been developed, such as phytotechnologies, use of biochars and other recyclates, mulch barriers, helophyte filters, etc. However, examples of their practical deployment are limited. NICOLE seeks to facilitate adoption of more sustainable strategies and techniques, and to understand whether there are barriers to this, and if so, how they could be overcome.





In cooperation with:





Implementation of Sustainability in Management of Contaminated Land

Preliminary program

#### Wednesday 12 June 2013 MEETING OF NICOLE WORKING GROUPS AND SUBGROUPS Venue: CS Vintage Lisbon – Rua Rodrigo da Fonseca 2, 1250-191 Lisbon, Portugal 09.00-10.30 Parallel meetings of NICOLE Working Groups: - Sustainable Remediation - Mercury 10.30-11.00 **COFFEE BREAK** 11.00-12.30 Meeting Regulatory Working Group 12.30-13.30 LUNCH 13.30-17.30 **ISG Meeting** 14.30-17.30 **SPG** Meeting 17.30-18.30 Welcome drinks 18.30-19.00 **General Assembly meeting** 19.00-21.30 ISG Information Exchange meeting

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## Thursday 13 June 2013

#### **CONFERENCE DAY 1**

08.30-09.00	Registration	
	OPENING SESSION Chair: Lucia Buvé (Umicore – Belgium)	
09.00-09.15	Opening and welcome - by Lucia Buvé, session chair (Umicore – Belgium)	
09.15-09.35	<ul> <li>Keynote speech</li> <li>by keynote speaker Paula Meireles (Ministry for Agriculture, Sea, Environment and Spatial Planning (MAMAOT) / Office of Planning and Policy (GGP) – Portugal)</li> </ul>	
09.35-09.50	<ul> <li>Update on NICOLE</li> <li>Steering Group – by Lucia Buvé, Steering Group chair</li> <li>Working Groups – by Working Group Leaders</li> </ul>	
09.50-10.30	Framing the workshop topic	
	- by Arthur de Groof (Grontmij – Netherlands & NICOLE OC Chair)	
10.30-11.00	COFFEE BREAK in poster area	
	SESSION 2:	
	Development of sustainability frameworks - 1	
	Chair: Peter Wouter (ENVIRON – Spain)	
11.00-11.30	<ul> <li>The Common Forum-NICOLE joint position paper on sustainable remediation</li> <li>by Dominique Darmendrail (BRGM – France &amp; Common Forum Secretary) and Lucy Wiltshire (Honeywell – United Kingdom &amp; NICOLE member)</li> </ul>	
11.30-12.00	Development of practical guidance to promote sustainability considerations in land contamination management in the UK - by Brian Bone (SuRF-UK Steering Group – United Kingdom)	
12.00-12.30	Flanders implements green and sustainable remediation by a threefold approach - by Griet van Gestel (OVAM – Flanders, Belgium)	
12.30-13.00	Questions and discussion	
13.00-14.00	LUNCH	



# Thursday 13 June 2013 (continued)

### **CONFERENCE DAY 1**

	SESSION 3: Implementing sustainability approaches in remediation projects - 1 Chair: Oliver Phipps (ERM – United Kingdom)
14.00-14.30	Field development of 'in situ reactive zone' (IRZ) for the sustainable treatment of Chromite ore processing residues (Copr) Heap - by Thomas Wohlhuter (Arcadis – France)
14.30-15.00	<ul> <li>Life cycle assessment of soils and groundwater remediation with zero valent iron nanoparticles: Results from a pilot study in Barreiro, Portugal</li> <li>by Helena Gomes and Celeste Jorge (CENSE (Center for Environmental and Sustainability Research) – Portugal)</li> </ul>
15.00-15.30	Mulch biowalls as low cost sustainable remediation for contaminated soils and groundwater - by Kevin Morris (ERM – United States of America)
15.30-16.00	Questions and discussion
16.00-16.30	COFFEE BREAK in poster area
	SESSION 4: Sustainable remediation using renewable energy Chair: Philippe Menoud (Dupont – Switzerland)
16.30-17.00	Green soil remediation projects at the Bilthoven and Amersfoort sites - by Johan van Leeuwen (Stichting Bodemsanering NS – Netherlands)
17.00-17.30	Parys Mountain metal mine, Anglesey, Wales: Sustainability in mine water remediation - by Rick Parkman (URS Infrastructure & Environment – United Kingdom)
17.30-18.00	Questions and discussion
19.30-22.00	NICOLE CONFERENCE DINNER Venue: Sr. Vinho Restaurant – Rua do Meio a Lapa 18, 1200-723 Lisbon



## Friday 14 June 2013

### **CONFERENCE DAY 2**

	SESSION 5:
	Implementing sustainability approaches in remediation projects - 2
	Chair: Hans-Peter Koschitzky (University of Stuttgart – Germany)
09.00-09.30	Optimizing the remediation solution for a complex solvent plume, following the NICOLE road map - by Matthew Pearce (WorleyParsons – United Kingdom)
09.30-10.00	Sustainability assessment of the redevelopment of Hexion with CEEQUAL - by Petra Brinkhoff (NCC Construction – Sweden)
10.00-10.30	<ul> <li>Sustainability assessment of remedial options for a former oil terminal site</li> <li>by Richard Bewley and Emily Ghedia (URS Infrastructure &amp; Environment – United Kingdom)</li> </ul>
10.30-11.00	Questions and discussion
11.00-11.30	COFFEE BREAK in poster area
	SESSION 6:
	Development of sustainability frameworks - 2 Chair: Elise Noël (Shell – France)
11.30-12.00	Integrating sustainable development principles into Shell's global soil and groundwater management program - by Jonathan Smith (Shell Global Solutions – Netherlands/United Kingdom)
12.00-12.30	Use of SURF-UK Indicators to evaluate remediation alternatives in Northern Ireland - by James Day and David Ellis (CH2M – Germany / DuPont – United States of America)
12.30-13.30	LUNCH
13.30-14.00	Optimizing remediation sustainability using a two-step stochastic method - by Gary Wealthall (Geosyntec Consultants – Canada)
14.00-14.30	Syndial approach to sustainable remediation - an Italian case study - by Emanuela Gallo, Giorgio Bianchi and Luciano Zaninetta (Syndial – Italy)
14.30-15.00	Questions and discussion



# Friday 14 June 2013 (continued)

### **CONFERENCE DAY 2**

	SESSION 7: Sustainable remediation using phyto-techniques Chair: Hans Groot (Deltares – Netherlands)
15.00-15.30	Engineered phytoremediation at an industrial site contaminated with aromatic hydrocarbons - by Frank Volkering (Tauw – Netherlands / Dow – Netherlands)
15.30-16.00	Overcoming barriers to effective phyto-management of contaminated land – the GREENLAND project - by Nele Witters (University of Hasselt – Belgium)
16.00-16.15	Questions, discussion and wrap up
16.15	CLOSING - by Prof. João Luis Correia Duque (President ISEG) (to be confirmed)





Arthur de Groof (Grontmij – Netherlands)(chair) Hans-Peter Koschitzky (VEGAS / University of Stuttgart – Germany)(vice-chair) Paul Bardos (R3 Environmental – United Kingdom) Ettore Ferrari (ENI – Italy) Hans Groot (Deltares – Netherlands) Philippe Menoud (DuPont – Switzerland) Allessandro Nardella (ENI – Italy) Elise Noël (Shell – France) Matthew Pearce (WorleyParsons – United Kingdom) Alan Thomas (ERM – United Kingdom) Peter Wouters (ENVIRON – Spain)

### **NICOLE Secretariat**

For further information on NICOLE membership, workshop program, registration & fees, or any other practical issue with regards to the conference, please contact:

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### Venues

NICOLE Network meeting	CS Vintage Lisbon
	Rua Rodrigo da Fonseca 2 – 1250-191 Lisbon, Portugal
Conference & workshops	School of Economics and Management Lisbon (ISEG)
	Rua do Quelhas 6 – 1200-781 Lisbon, Portugal
Conference dinner	Sr. Vinho Restaurant
	Rua do Meio a Lapa 18 – 1200-723 Lisbon, Portugal

### Registration

Please complete the conference registration form, available online through <u>NICOLE.org</u> and/or the <u>NICOLE</u> <u>secretariat</u>. Deadline for registration: 5 June 2013.

#### Fees

Participation in the NICOLE Spring 2013 Workshop is free of charge for NICOLE members, Common Forum members, and conference speakers. Information on admission fees for other participants can be obtained through the <u>NICOLE secretariat</u>.

Participation in the Conference Dinner on 13 June 2013 at the Sr. Vinho Restaurant will be settled individually at € 50 per cover.

### In cooperation with:





