



## **Common Forum Spring meeting 2022**

31 May – 3 June , 2022

Orléans, FRANCE

# **MEETING REPORT**



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### WELCOME

The Common Forum Spring meeting 2022 at BRGM in Orléans, France was opened by the President of the French Geological Survey BRGM Mrs. Michèle Rousseau and Mr. Jean-Luc Perrin from the French Ministry of Ecological Transition.

This meeting was attended by new representatives, partner organisations, guests and national experts from:

- Sweden: Kristina Widenberg (Swedish EPA)
- NICOLE: Hayley Thomas
- Delegates and experts from France

### SESSION 1 – CONTAMINATED LAND MANAGEMENT IN FRANCE

#### **Session 1-1 – The progressive construction of a policy for the management of contaminated sites – Sami KAABOUCH**

Sami Kaabouch gave an overview of the historical development of contaminated sites management in France. It started with the installation of the inventories BASIAS (currently 300 000 sites) and BASOL (currently 9 000 sites) and a systematic remediation in the 1990s. The next step was towards a risk based approach with a conceptual model, doses quantification and toxicity and exposition scenarios based on land uses in 1999, followed by introducing the management plan (PG), including cost versus benefits approach with priorities to treating or suppressing sources and cutting migration pathways and abandoning the simplified risk assessment and its threshold values in 2007. In 2011, National standards based on global services and a certification were introduced, then in 2012 the first guide for excavated soils reuse. In 2017, the current methodology was implemented with new diagnosis and investigations tools, the creation of the Remediation Design Plan (PCT) which is an engineering study meant to deepen the PG with middle-scale experiments, emphasis on the standard and certification for contaminated sites and soils practitioners and the integration of management of former mining sites.

All databases (Basol, Basias and a new database Outil SIS (around 4.000 sites)) are now merged in InfoSols and published in géorisques which is publicly available (<https://www.georisques.gouv.fr/>).



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### **Session 1-2 – Recent and incoming developments – Guillaume BAILLY**

Guillaume Bailly presented the contaminated sites management perspectives. From 1 June 2022 mandatory certifications were introduced regarding industrial site closure including a management plan and remediation work. Homogenization work on excavated soil recovery is in progress e.g. on existing guides regarding polluted and non-polluted soil recovery in development projects that allow end-of-waste status. Developments on land-uses typology are ongoing which will end in a decree. Incoming developments will take into account biodiversity and ecosystems.

## **SESSION 2 – NEWS FROM COUNTRIES AND INITIATIVES**

### **Session 2-1 – Germany – the revised soil protection ordinance 2021 – Jörg FRAUENSTEIN**

Jörg Frauenstein presented the new Ordinance introducing a Substitute Building Materials Ordinance, re-drafting the Federal Soil Protection and Contaminated Sites Ordinance and amending the Landfill Ordinance and the Commercial Waste Ordinance. This so called “jacket regulation” is based on a research program understand and describe leakage prognosis for soil like materials and their impacts on soil and groundwater. Furthermore, a long communication process was needed to harmonize this new regulation with the existing waste and landfill regulations. The new “Jacket” Ordinance will come into force on 8 January 2023 with the objectives to promote the circular economy, to protect and mitigate the use of natural resources and to ensure proper and harmless recycling of soil related mass streams.

LINK to the translated version for EU-Notification: <https://ec.europa.eu/growth/tools-data-bases/tris/de/search/?trisaction=search.detail&year=2021&num=124>

### **Session 2-2 – Risk-based criteria for priority settings in the management of contaminated sites in Italy – Antonella VECCHIO**

The current legislation on contaminated sites identification procedure in Italy (Legislative Decree n. 152/06) was presented by Antonella Vecchio. The legislation defines potentially contaminated and contaminated sites as well as identification procedures, regulates the regional remediation plans with an order of priority of interventions. ISPRA establishes the risk-based methodology for setting priorities. Several parameters for potentially contaminated sites ranking criteria as well as for contaminated sites ranking criteria were set. These proposed criteria are in line with the EU Soil Health Law provisions.

In a next step, the proposal of the scoring system and software development for potentially contaminated methodology will be tested. The same procedure will be carried out for the criteria on contaminated sites.



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### **Session 2-3 – Flemish Guidance on Nature Based Solutions in Soil Remediation - Kris VAN LOOY**

Kris Van Looy gave an overview of the recently finalised Flemish Guidance on Nature Based Solutions in Soil Remediation providing solutions for remnant pollution in remediation / green and natural areas as well as an alternative for dig-and-dump / pump-and-treat for specific situations/pollution. Phytoremediation and bioremediation were introduced within two international project: the Resanat project ([keep.eu/projects/22108/RESANAT-EN/](http://keep.eu/projects/22108/RESANAT-EN/)) applied with organic pollutants (PAHs and oil), the Narmena project ([ovam-english.vlaanderen.be/web/narmena](http://ovam-english.vlaanderen.be/web/narmena)) with metal pollution. Another project was presented to highlight the importance of communication, choices and site specific applications to push for a healthy living environment (Park Spoor Noord – Antwerp) – from an old railway yard to a viable city park.

### **Session 2-4 – Greece – Contaminated Soil Management and best available practices - Iraklis PANAGIOTAKIS**

Iraklis Panagiotakis presented the recent project “Improved hazardous waste and contaminated soil management in Greece”, focusing on the objective to investigate the best available EU practices and make recommendations for a new contaminated soil management framework in Greece. The methodology aimed to look at the gaps and needs in Greece, at EU and international experiences (literature review, questionnaires) and concluded with best practices and roadmaps. One of the results was that the authorities have identified the need for a robust contaminated soil management framework for which all relevant stakeholders expressed their support and next steps were set within a roadmap.

### **Session 2-5 – Finland: groundwater contamination and understanding WFD status objectives (EU Court ruling 2020/ C-535/18) – Jussi REINIKAINEN**

Within a construction plan of a motorway the runoff discharge into groundwater brought up the question what constitutes a deterioration of a groundwater body within the meaning of the Water Framework Directive (Directive 2000/60/EC)? The consequent EU Court of Justice ruling C-535/18 came to the conclusion that the failure to comply with one quality element at a single monitoring point within a groundwater body implies that there is a deterioration of the status of a body of groundwater for the purposes of Article 4(1) of the WFD.

Finland did an analysis of this judgement. The ruling seems to incorporate difficulties with integration to other regulations and policy objectives (risk-based approach, circular economy, sustainability in risk management etc.). Furthermore, it seems like a significant expansion of the scope of WFD and EQSs.

The questions come up if this was the idea of the CJEU or are there some misunderstandings/-interpretations on the ruling?



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### **Session 2-6 – Denmark – progress in managing contaminated sites and its indicator LSI003 – Christian ANDERSEN**

Christian Andersen shared his considerations on the EU pending Soil Law and its proposed binding provisions and mandatory reporting, the context to the EIONET LSI003 Indicator and what thus is to be expected to spend on public programmes in terms of management of soil contamination. A summary was given on the lessons learned and mistakes made.

### **Session 2-7 – IMPEL – Water and Land Remediation project for promoting innovation – Marco FALCONI**

IMPEL, the European Union Network for the Implementation and Enforcement of Environmental Law ([www.impel.eu](http://www.impel.eu)), is promoting a project called Water and Land Remediation. The general objective is targeted to enhance understanding regarding the deployment of remediation technologies, to speed up the process, focusing to the remediation phase that is often the bottleneck, promoting in-situ and on-site technologies versus more impacting technologies.

In 2021, two reports have been published on In-situ Chemical Oxidation (ISCO) and Soil Vapor Extraction (SVE): [www.impel.eu/projects/water-and-land-remediation/](http://www.impel.eu/projects/water-and-land-remediation/).

In 2022 the project starts with a focus on two techniques: multi phase extraction (MPE) and soil washing. For this aim, two questionnaires have been developed on case studies regarding these two remediation technologies. First draft guidelines are being prepared and will be published on the IMPEL website for external comments by 1 September 2022.

The upcoming technologies for the next year are under discussion and will be announced soon.

## **SESSION 3 – SOIL INVESTIGATION – BEST PRACTICES AND INNOVATION**

### **Session 3-1 – The French initiative and factsheets on innovative technologies (Fiches Sites et Sol Pollués – Techniques Innovantes) - Noémie DUBRAC**

The management of contaminated sites often comes down to the chemical analyses of samples which give information on the contaminant presence and quantity. But additional parameters are often necessary (contaminant mobility, bioaccessibility, toxicity, etc.) in order to improve the relevance of the conceptual site model and determine more robust and efficient remediation strategies.



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Thus a project on innovative fact sheets was started in order to share operational information to encourage the use of such technologies with a large panel of stakeholders, and to present a wide panel of technologies: relevant in the context of contaminated site management, new but mature. With the innovative fact sheets it can be evaluated whether the innovative technologies are adapted or not to the studied contaminated site. They consist of a conceptual description, the contaminants, the equipment, methodology & technical limitations, pros and cons and lead time and costs.

Several fact sheets have already been produced (e.g. CSIA, geostatistics, bioaccessibility tests etc.). In a next step, more innovative techniques to describe, a feedback to evaluate the impact of the sheets and the integration in the online decision support tool are planned.

### SESSION 5 – RESEARCH PROJECTS

#### **A step towards prioritisation of CECS in soil: Results of the PREMISS project - Corinne MERLY**

Responding to CECS increasing concerns in soil, the R&D PREMISS (PRIoritisation of EMerging chemical compounds In Soils) project explored approaches to prioritise CECS in groundwater and subsoil. The PREMISS project was a one year project (2021) funded by the SOILVER platform (including ADEME, Ministry of IenW, SPW-ARNE and OVAM) and was performed by a French (BRGM – coordinator), Belgium (ISSeP, Arcadis and Witteveen&Bos) and Dutch (Deltares and RIVM) R&D team. The PREMISS project achievements' include an inventory of some CECS families in soils, development and test of a prioritisation prototype to prioritise CECS in soil and sub-surface, recommendations for and from prioritisation.

#### **Urban soil geochemical background: state of the art, pitfalls and perspectives - Stéphane BELBEZE**

The literature review of urban soil background determination, covering more than 77 cities in 38 countries, has shown a surprising diversity of techniques that vary by country (legislation, capacity of research organizations), by project (budget level, use of innovative techniques) and by author ("schools of thought" in the field of geochemistry). This topic has proven to be an algorithmic mine of geochemical interpretation methods. A close look at these methods reveal several issues related to epistemic uncertainty (related to the incomplete and/or imprecise nature of available information) and identify new research to be conducted.



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### **Use of Non-Newtonian Fluids for soil remediation - Stéfan COLOMBANO**

Non-Newtonian Fluids (NNF) have a viscosity that changes according to shear stress. The liquids used are environmental-friendly gels or foams. The displacement of NNF is homogeneous even in a heterogeneous medium (with moderate fingerings and preferential pathways). By adapting the properties of these NNF, it is possible to push free product (NAPL) to recover it, to vectorise additives (oxidants or reducers) or to block groundwater flows.

### **State of the art on microplastics in groundwater – Amélie HOARAU BELKHIRI**

Microplastics are widespread in the aquatic and soil environment. The question of the transfer of microplastics from soil to groundwater and their impacts on human health was raised in this study. This was done by collecting the scientific papers dealing with this topic and by classifying text segments with a text-mining approach. This allowed to identify 4 research topics and organize the results into a summarizing table. These were on the sources of groundwater microplastics, the main types, the human exposure, particularly from drinking water and the potential environmental and human effects. Compared to research on aquatic or soil compartment, scientific data on groundwater are more limited. The existing results show divergence due to differences in context (alluvial aquifer, fractured rock aquifer, karst aquifer...), collecting, sampling and analytical methods. This divergence requires further research with standardized analytical protocols and reference materials. The associated research gaps were identified by using the same approach. Five topics emerged on the transfer of microplastics from soil to underground, the contribution of groundwater to drinking water microplastic pollution, the interaction with other contaminants, the human and environmental effects, the protective and remediation solutions.

## **SESSION 6 – CONNECTING CLM FOR CO-CREATION**

### **Collaboration between networks and platforms**

On 25 November 2021 a joint Workshop on “Getting a grip on lead in soil – problems and solutions” was initiated by SOILveR, COMMON FORUM and EIONET ([www.soilver.eu/joint-meetings/](http://www.soilver.eu/joint-meetings/)).

In order to further connect contaminated land management for co-creation this session was dedicated to possible joint initiatives with the objective to brainstorm on ideas, to collecting thoughts and developing preliminary ideas. The following networks and platforms in Europe as a snapshot were introduced:

- EU Soil Observatory (EUSO) TWG Soil Pollution
- European Topic Centre on Human Health and the Environment (ETC HE)
- EIONET WG Soil Contamination



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- SOILveR
- NICOLE
- EmConSoil
- NORMAN

One of the outcomes of the discussions were to integrate all of them to the COMMON FORUM homepage with a brief description, activities and contact details. Another idea was to create a COMMON FORUM library of already established guidelines within those networks.

Furthermore, the task force discussions on the CF WG Soil as a Resource, the CF PFAS-team and the CF diffuse pollution initiative followed.

A webinar is envisaged in September 2022 where the results of the discussions will be presented and further discussed how the process can be followed.

## NEXT CF MEETING

### 2022

- Autumn 2022 – Athens (Greece), October/November 2022

### 2023

- Spring 2023 (indicating interests / candidates) – Sweden and Estonia





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### PARTICIPANTS

Vanja	Alling	Norway
Ana Isabel	Alzola Echazarra	Spain
Christian	Andersen	Denmark
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Stéfan	Colombano	France
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Marco	Falconi	Italy
Jörg	Frauenstein	Germany
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Christiane	Wermeille	Switzerland
Kristina	Widenberg	Sweden



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### Online

Tomás	Albergaria	Portugal
Frédérique	Cardière	France
Amélie	Hoarau Belkhiri	France
Marie	Jailler	Belgium
Viktoriya	Lukhmanova	Germany
Iraklis	Panagiotakis	Greece
Regina	Vilão	Portugal
Piotr	Wojda	EC JRC Ispra

**Note:** Handouts of the presentations from this meeting are available for download at [www.commonforum.eu](http://www.commonforum.eu)