





SCIENTIFIC PROGRAM 16-20 September 2024

(16-17 Sept. online – 18-20 Sept hybrid)



IN PRESENCE IN FERRARA (ITALY): BOOK YOUR FREE TICKET HERE ONLINE WITH ZOOM: RESERVE YOUR SEAT IN OUR WEBSITE

https://remtechexpo.com/remtech-europe/



TIME ZONES	Mon 16 Sept ONLINE	Tue 17 Sept ONLINE	Tue 17 Sept ONLINE	Wed 18 Sept ONLINE
CEST 09:00-11:00 CST 15:00-17:00 IST 12:30-14:30 EDT 03:00-05:00 BRT 04:00-06:00 CEST 11:30-13:30 CST 17:30-19:30 IST 15:00-17:00 EDT 05:30-07:30 BRT 06:30-08:30	European Commission Soil Pollution: policies and data	Reseau National d'Expertise Scientifique et Technique sur les sols Session francophone: comment évaluer la santé des sols?	Monitored Natural Attenuation (MNA) 4 CLAIRE LEADING SUSTAINABLE LAND REUSE Natural Source Zone Depletion (NSZD)	Risk Assessment 12
CEST 14:30-16:30 CST 20:30-22:30 IST 18:00-20:00 EDT 08:30-10:30 BRT 09:30-11:30 CEST 17:00-19:00 CST 23:00-01:00 IST 20:30-22:30 EDT 11:00-13:00 BRT 12:00-14:00	US Army Corps of Engineers ® Dredged sediments	14:30 PFAS in Consume 15:30 Assessment of NA Sediments with a Flux C 16:30 Toxicity Testing w 17:30 A Combination of on Storage Tanks 18:30 Stakeholder Enga 20:00 Drone Technolog Assessment	r Products APL Ebullition in Chamber with the Mayfly F Three Standards gement 10	Wed 18 Sept 14:30 BLUE ROOM – 1°floor PROMISCES: PFAS treatment technologies for contaminated sites: soils, sediments and groundwater

TIME ZONES	Wed 18 Sept WHITE ROOM- 1°floor	Wed 18 Sept EUROPE ROOM – 2°floor	Thu 19 Sept BLUE ROOM – 1°floor	Thu 19 Sept WHITE ROOM- 1°floor
CEST 09:00-11:00 CST 15:00-17:00 IST 12:30-14:30 EDT 03:00-05:00 BRT 04:00-06:00	PFAS risk assessment and management	Biochar and soil amendments	09:00 – 13:00 BLUE ROOM – 222 NYUGIL	Groundwater remediation 23
CEST 11:30-13:30 CST 17:30-19:30 IST 15:00-17:00 EDT 05:30-07:30 BRT 06:30-08:30	Drones, artificial intelligence and new frontiers in characterization	Healthy soil and the Soil Monitoring Law	Thu 19 Sept 13:50- 17:30 CEST In front of Pavillion 1 LIVE 27 DEMO	PFAS groundwater remediation
CEST 14:30-16:30 CST 20:30-22:30 IST 18:00-20:00 EDT 08:30-10:30 BRT 09:30-11:30	3D and High Resolution Characterization Techniques	Sustainable remediation and national programs 18	Thu 19 Sept ONLINE 17:00-19:00 30 LNAPL site management	CSIA and genetic in Soil Bioremediation 28
CEST 17:00-19:00 CST 23:00-01:00 IST 20:30-22:30 EDT 11:00-13:00 BRT 12:00-14:00	In situ thermal remediation	Bioremediation and nature-based solutions 20	Thu 19 Sept ONLINE 17:00-19:00 Sediment Cap Chemical Isolation Thu 19 Sept Note The Interstate * The Inte	Chlorinated solvents remediation 31

TIM	E ZONES	Thu 19 Sept	Fri 20 Sept	Fri 20 Sept WHITE ROOM- 1°floor	Fri 20 Sept EUROPE ROOM – 2°floor
200					EUROPE ROUNI – 2 1100r
3.7	CEST 09:00-11			Innovative PFAS soil	* **
*:	CST 15:00-17		NICOLA Setront for industrally Contemporated hand of laters	remediation	* IMPEL *
100000	IST 12:30-14		The management		BAT in
	EDT 03:00-05	00	of cont'd sites in		the wastewater
\(\)	BRT 04:00-06	00 (24)	Africa: Challenges and Solutions	36)	treatment (35)
(0)	CEST 11:30-13	Mining and Soil	From 14:00 (24 Sept) to	Test and full scale in-situ	Risk assessment and
*]:	CST 17:30-19	Remediation	14:00 (25 Sept) CEST 24h SUSTAINATHON	soil remediation	F&T models
•	IST 15:00-17	Innovations			
	EDT 05:30-07		(45)	_	
			Sustainability the road to global value	38	(37)
	CEST 14:30-16		Street Control of the	AFFF and PFAS impacted	Advances in
*}	CST 20:30-22	30 hydrocarbons	41) AESAS	sites	Ecotoxicology and
•	IST 18:00-20	00			Ecosystem evaluation
5000000	EDT 08:30-10	(29)	Vapor intrusion		(39)
	BRT 09:30-11		Tapor merasion	(40)	39)
27%	CECT 47:00 40	Wastewater and		Climate change and	S LA ENFOQUE
*:		COMOGO CINAGO	Bioreme 🔝	environmental challenges	DU SOL 43
	CST 23:00-01	00	diation AESAS		An interactive
300000	IST 20:30-22		Techniq	42)	workshop to discover
400000	EDT 11:00-13		ues Used (44)		the soil's complexity
	BRT 12:00-14	00	in Brazil		and propose actions



CONFERENCE

RemTech Europe, the International Conference and Exhibition on land and water remediation

markets and technologies, is set for **September 16-20, 2024**.

The first two days, September 16-17, will be fully digital and streamed online. The following three days, September 18-20, will be hybrid, allowing in-person attendance as well as Zoom broadcasts. This format enables global participation, allowing anyone to follow nearly every session throughout the five-day event.

The conference aims to share knowledge, innovations, and case studies, fostering the development of remediation processes and the application of new, sustainable technologies. It also serves as a platform for suppliers and



clients to connect and discuss available services and technologies.

The agenda is packed and designed to promote the exchange of knowledge and communication among all relevant parties, involving leading European stakeholders.

The annual RemTech Europe conference provides an overview of the European market and emerging trends. Participation is **free of charge**.

EXHIBITION

RemTech Europe will be held as part of the RemTech Expo, Europe's leading Environmental Technological Hub, specializing in the rehabilitation, regeneration, and sustainable development of territories. The event takes place annually in Ferrara, Italy, this year from September 18-20, 2024.

RemTech Expo is more than just a platform to present the current state and future outlook of the industry. It is a dynamic network of international experts working year-round to foster constructive and effective collaboration between the public and private sectors. This collaboration supports the development of ideas and projects that benefit Europe. The event is organized each year in

partnership with major international authorities.

The Hub features a diverse community, including representatives from public administration, regulatory bodies, private companies, innovative start-ups, universities, research centers, trade associations, and professionals. These participants engage in discussions and intensive networking through conference sessions, workshops, working groups, refresher courses, educational workshops for schools, technological pilot tests, and cultural evenings.

RemTech Expo comprises ten thematic segments and ten public-private Scientific Technical Committees, involving over five hundred experts.



More than three hundred significant companies from various supply chains participate. The event includes two hundred national and international congressional proposals and appointments, with two thousand ambassadors and speakers from one hundred countries across all six continents.



WHO WILL PARTICIPATE?

RemTech Europe will attract leaders and key stakeholders from academia, government, regulatory agencies, site owners, private consulting firms, and various other environmental professionals. Some of the job titles represented include CEOs, Chief Scientists, Chief Hydrogeologists, Directors of Environmental Projects, Drinking Water Treatment Engineers, Environmental Chemists, Environmental Remediation Engineers, Environmental Project Scientists, Field Environmental Engineers, Principal Geochemists, Project Directors, Regulators, Remediation Engineers, Research Microbiologists, Restoration Project Managers, Senior Engineering Geologists, Toxicologists, Vice Presidents of R&D, and Wastewater Treatment Engineers.

HOW TO PARTICIPATE TO ONLINE AND HYBRID SESSIONS?

Participation as attendant is free upon registration for everybody. You may register yourself in your favorite sessions, submitting your details in the **Google Modules** provided not later than **9 September** before the starting of Remtech Europe. Our secretariat will send you the link and the password to connect at the email you provided. For the Certificate of Attendance, it is necessary two months at least. It will be sent to the same email of your registration.



Credit for the cover image: MANEL FERNANEZ – LAMOR CORPORATION



HOW TO PARTICIPATE IN PRESENCE?

For who is joining us physically us in Ferrara (Italy), you have to register here not later than **16** September 2024 https://ticket.remtechexpo.com. Don't wait till the last week, the system may be overloaded with requests. You will then have to print your ticket and bring them in Ferrara and in this way you would avoid the queue at the desk, going directly to the entrance gate. This is your FREE TICKET.

You may also register on site but in this way, you have to pay a secretariat fee of 15 €/day not a big amount, but there could be the queue at the ticket office.

If you come by car, the parking has a cost of 7€/day. Exhibitors and sponsors would park for free.



Then you have to read and agree/disagree on the treatment of your data.



Registrazione avvenuta con successo

Grazie Marco per esserti registrato all'evento "RemTech Expo 2024", puoi già ora ottenere il biglietto da questa pagina cliccando l'apposito pulsante oppure scaricarlo dalla mail che ti abbiamo inviato all'indirizzo indicato (controlla anche nella cartella spam).

Thank you Marco for registering for the "RemTech Expo 2024" event, you can already get the ticket from this page by clicking the appropriate button or download it from the email we sent you to the address indicated (also check your spam folder).



TORNA ALLA HOME

THEN JUST PRINT YOUR FREE TICKET OR SAVE IT IN YOUR MOBILE PHONE



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18-20 SETTEMBRE 2024

18-20 SEPTEMBER 2024 remtechexpo.com

STAMPA IL TUO BIGLIETTO
ED ENTRA SUBITO IN FIERA
PRINT YOUR TICKET AND VISIT THE
SHOW

COME ARRIVARE HOW TO GET HERE



AEREO - AIRPLAIN

L'aeroporto Guglielmo Marconi di Bologna dista 45 Km dal Quartiere fieristico di Ferrara. Chi sbarca al Marconi può usufruire del servizio di bus-navetta "Ferrara Bus&Fly" e arrivare in soli 60 minuti a Ferrara. Il trasferimento da e verso l'aeroporto prevede 8 corse giornaliere. Per maggiori informazioni, visitate il sito www.ferrarabusandfly.it.

The Guglielmo Marconi airport of Bologna is 45 km from the Ferrara exhibition center. Those who disembark at the Marconi can take advantage of the shuttle bus service "Ferrara Bus & Fly" and arrive in Ferrara in just 60 minutes. The transfer to and from the airport includes 8 trips a day. For more information, visit the website www.ferrarabusandfly.it. BIGLIETTO VALIDO PER 3 GIORNI, 1 INGRESSO AL GIORNO (sono ammessi fino a due rientri giornalieri). Il biglietto è strettamente personale e non cedibile e deve essere conservato per tutta la durata dell'evento. Il personale all'ingresso potrà effettuare controlli casuali attraverso la verifica di un documento di identità.

This ticket is strictly personal and non-transferable and must be kept for the entire duration of the event. The staff at the entrance will be able to carry out random checks by verifying an identity document.

ATTENZIONE

Il biglietto deve essere stampato in buona qualità e con una risoluzione di almeno 300dpi (a colori o in bianco e nero). Usando il biglietto lei accetta di osservare le norme di accesso al quartiere fieristico. I biglietti no possono essere alterati o copiati e perdono validità se il codice risulta danneggiato e non leggibile. Per questo vanno conservati con cura

NOTE

Your card must be printed in good quality and with a resolution of at least 300dpi (in color or black and white). By using the ticket, you agree to observe the rules of access to the fairgrounds. Tickets cannot be altered or copied and lose validity if the code is damaged and unreadable. This is why they must be kept with care.



SHOW OFFICE

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www.remtechexpo.com www.ferraraexpo.com

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ORGANIZE YOUR TRIP TO FERRARA (GMaps

https://goo.gl/maps/nKBmiF9FqVUzYToe9)

From Bologna Airport (BLQ)

Bologna's Guglielmo Marconi Airport is 45 km from the Ferrara Exhibition Centre.

'Ferrara Bus&Fly' shuttle bus service and arrive in Ferrara in just 60 minutes. The transfer to and from the airport includes 8 trips per day. For more information, visit http://www.ferrarabusandfly.it/en/ or call +39 333 2005157. Cost is 17€ online, 20€ on board

Taxi is the fastest way as it takes 30 minutes and costs around 80-100 € (http://www.taxiferrara.it/, tel. +39 0532 900900)

Train takes from 35 to 50 minutes and is the cheapest way, the cost of regional train from Bologna to Ferrara is 5,20 € with more than 30 runs per day (https://www.trenitalia.com/en.html). To go from the Bologna Airport to the Bologna train station it takes around 25 minutes with the city bus BLQ with a cost of 6,00 €





From Venice Airport (VCE)

Train takes around 1h15 and is the cheapest way, the cost of train from Venezia Mestre to Ferrara is from 9,00 to 23,90 € depending on train type and service. There are more than 30 runs per day (https://www.trenitalia.com/en.html). To go from the Venice Airport to the Venezia Mestre train station it takes around 20 minutes with the ATVO Airport Express Bus or Line 15 with a cost of 9,00 €.

From Milan Malpensa Airport (FCO)

Train takes around 2h20 and is the cheapest way, the cost of train from Milano Centrale to Ferrara is from 25,00 to 50,00 € depending on train type and service. There are more than 20 runs per day (https://www.trenitalia.com/en.html). To go from the Milan Malpensa Airport to the Milano Centrale train station it takes around 50 minutes with the Malpensa Express Train with a cost of 13,00 € (https://www.malpensaexpress.it/en/).

From Rome Fiumicino Airport (FCO)

Train takes around 2h50 and is the cheapest way, the cost of train from Roma Termini to Ferrara is from 50,00 to 75,00 € depending on train type and service. There are more than 20 runs per day (https://www.trenitalia.com/en.html). To go from the Rome Fiumicino Airport to the Roma Termini train station it takes around 45 minutes with the Terravision Bus with a cost of 6,00 € (https://www.terravision.eu/airport transfer/bus-fiumicino-airport-rome/?noredirect=en US).

From Bergamo Orio al Serio Airport (BGY)

Train takes around 3h20 and is the cheapest way, the cost of train from Bergamo to Ferrara is from 28,00 to 60,00 € depending on train type and service. There are more than 20 runs per day (https://www.trenitalia.com/en.html). To go from the Bergamo Orio al Serio Airport to the Bergamo train station it takes around 15 minutes with the Airport Bus with a cost of 2,60 € (https://www.atb.bergamo.it/en).

From Munchen Airport (MUC)

Train takes around 7h and is the cheapest way, the cost of train from Munchen HBF to Ferrara is from 45,00 to 60,00 € depending on train type and service. There are 3 runs per day (https://www.trenitalia.com/en.html). To go from the Munchen Airport to the Munchen HBF train station it takes around 40 minutes with different means of transport and with a cost of 11-15 € (https://www.munich-airport.com/public-transport-260822).



CONVENTIONS RESERVED



HOTEL	SINGOLA	DUS	DOPPIA	TRIPLA	CONTATTI
	SINGLE	DOUBLE SINGLE USE	DOUBLE	TRIPLE	
HOTEL DE PRATI	€ 86,00	€ 120,00	€ 130,00		info@hoteldeprati.com +39 0532 241905
LUCREZIA BORGIA	€ 75,00	€ 85,00	€ 104,00	€. 140,00	info@hotellucreziaborgia.it +39 0532 909033
HOTEL TOURING		€ 139,00	€. 159,00	DEPENDANCE	info@hoteltouringfe.it +39 0532206200
	€ 129,00	€ 149,00	€ 169,00	HOTEL CLASSIC	
		€ 169,00	€. 189,00	HOTEL DELUXE	
ANNUNZIATA			€ 190,00 € 220,00 € 170,00		info@annunziata.it +39 0532 201111 WhatsApp +39 39250 26757
B&B NETTUNO		€ 69,00	€ 74,00	COLAZIONE ESCLUSA	<u>ferrara@hotelbb.com</u> +39 0532 977155
HOTEL CARLTON	Sconto 10%, indicare codice "RemTech" sul sito www.hotelcarlton.net			info@hotelcarlton.net +39 0532 211130	
HOTEL IL DUCA D'ESTE	€ 79,00	€ 79,00	€ 99,00	€ 129,00	info@ilducadeste.it +39 0532 977676
HOTEL EUROPA	€ 80,00	€ 100,00	€ 120,00		info@hoteleuropaferrara.com +39 0532 205456
HOTEL NAZIONALE	€ 125,00	€ 135,00	€ 140,00		info@hotelnazionaleferrara.it +39 0532 243596
HOTEL OROLOGIO		€ 200,00	€ 250,00		info@hotelorologio.com +39 0532 769576
RADISSON HOTEL		€ 125,00 € 135,00	€ 140,00 €. 150,00	PREMIUM SUPERIOR	info.ferrara@radisson.com +39 351 6645647
TORRE DELLA VITTORIA		€ 120,00	€ 150,00		info@hoteltorredellavittoriaferrara.com Tel.: +39 0532 769298



How to arrive from downtown Ferrara to the conference venue

FREE REMTECH COUCH

The most convenient way is the couch of Remtech, that will leave from the city centre, pass to the train station than it will arrive to the venue. Frequency is every 50 minutes starting from 8:10 and it is free. The bus stop named "Stazione Ferroviaria" is located at the exit of the railway station, on the left side, next to the bike parking (https://goo.gl/maps/Bkzi57UHhduQ63Vy5).

The bus stop named **"Castello Estense"** is in the city centre in Viale Cavour, in front of the Hotel Touring, behind the public gardens (https://goo.gl/maps/M4AKxc9kYbqXpXrZA).

You can easily recognize the shuttle by the RemTech logo.

The timetable could change according to the traffic, best choice is to take the first run.

Castello Estense Hotel Touring	Stazione Ferroviaria Railway Station	Quartiere Fieristico Exhibition center	
8.15	8.25	8.40	
9.00	9.10	9.25	
9.45	9.55	10.15	
10.35	10.45	11.00	
14	11.15	11.30	
194	11.45	12.00	
194	12.15	12.30	
100	12.45	13.00	
	13.15	13.30	
117	13,45	14.00	
0.7	14.15	14.30	
7/2	14.45	15.00	
15	15.15	15.30	
94	15.45	16.00	
(0)	16.15	16.30	
194	16.45	17.00	
£	17.15	17.30	
	17.45	18.00	
18.20	18.30	18.45	
19.05	19.15	19.30	
19.55	20.05		



BUS n.11

from Bus n.11 the Station "Stazione FS" Train (https://goo.gl/maps/W3cvZhctmL6CCgfT8) or from the Estense Castle "Cavour Giardini" (https://goo.gl/maps/YasF8mKbm3das3DG8) in the direction "Chiesuol del Fosso". The nearest stop to Ferrara flere is "Centro Congressi" (https://goo.gl/maps/NzsNWcPR4Fgvax6P7) at 500 meters from FerraraFiere (https://www.tper.it/fe-11), cost is 1,50 €. Runs from the central station (from Cavour Giardini add 5 minutes) 05:17 06:15 06:30 06:54 07:09 07:24 07:47 08:12 08:37 08:57 09:17 09:37 09:57 10:17 10:37 10:57 11:17 11:37 11:57 12:17 12:37 12:57 13:17 13:37 13:57 14:17 14:37 14:57 15:17 15:37 15:57 16:17 16:37 16:57 17:17 17:37 17:57 18:17 18:37 18:57 19:17 19:37 19:57 20:17 20:31 20:49. Timetable could change.

TAXI

Fastest way from downtown to the venue is the taxi, the cost is around **12,00-15,00** € and the time is around 10 minutes according to the traffic (http://www.taxiferrara.it/, tel. +39 0532 900900)





WALKING

Walking is the most environmental sustainable way to reach the venue. It is 4 km from the City Centre, it takes around 50 min, but it is not suggested in hot hours and when you have luggage with you.

NOT ONLY REMTECH EUROPE – ENJOY FERRARA AND ENJOY ITALY- ACTIVITIES & IDEAS

CYCLETOURISM

Ferrara is the 'Italian city of bicycles'. Flat and surrounded by the water of the river Po and its tributaries, the entire Province of Ferrara is a richly evocative landscape in which land and water are the protagonists. From Cento to Comacchio, from the hinterland to the sea, there are hundreds of kilometres marked by a formidable network of cycling routes that wind between the city and the countryside, between protected oases and villages on the plains. There are simple and evocative routes such as the one along the



banks of the Po River with restaurants along the way. The daily bicycle rental is 8 €. LINK FOR MORE INFO

FERRARA CITY CENTRE IS UNESCO WORLD CULTURAL HERITAGE

Ferrara's historic centre was awarded from UNESCO the prestigious title of 'Renaissance City' in 1995 as an 'admirable example of a city designed in the Renaissance, which preserves its historic centre intact and expresses urban planning canons that have had a profound influence on the development of town planning in the following centuries'. Some truly characteristic streets such as Via delle Volte, as well as the main square (today Piazza Trento e Trieste), beside which stands the Romanesque-



Gothic Cathedral (1135). An extraordinary period began in the 12th century when the Este family settled in Ferrara, with the construction of the Castello Estense (1385), Palazzo Schifanoia (1385) and Palazzo dei

Diamanti (1492). https://whc.unesco.org/en/list/733 Guided tour costi s 12€/person, LINK FOR MORE INFO

THE HEART OF PO DELTA PARK ON HORSEBACK

The Delta breed horses, present at the Spiaggia Romea stud farm and of Camargue derivation, are ideal for peaceful walks immersed in the nature of the Po delta, thanks to their meek and docile temperament. Accompanied by a specialized guide, you can go horseback riding in an environment of extraordinary charm. Cost is 24€ INFO LINK



THE COMACCHIO'S LAGOONS BY BOAT

Boat trips along the inner waterways of the mirror lagoon, a unique environment and spectacular home to flamingos. The guided tour includes a visit to the fishing stations. Cost is 14€. INFO LINK



26 km of coast with beaches of white and thin sand, the seven Lidi Ferraresi are an ideal destination for a vacation at the sea with children, for the lover of open air activities and to relax. On its 26 km of coast 7 lidos follow one another: Volano, Nazioni, Pomposa, Scacchi, Porto Garibaldi, Estensi and Spina. All of them are characterized by safe beaches and equipped for families, with golden sand and a sea which reverses gently. INFO LINK





VISIT BOLOGNA, VENICE, PADUA, FLORENCE, PISA, ROME

All these destinations are easily reachable by train from Ferrara (https://www.trenitalia.com/en.html)





Bologna 35 min

Venice 1h15min



Padua 40 min



Florence 1h40min Pisa 2h30min Rome 2h50min





SESSION 1 Soil Pollution: policies and data

MONDAY 16 SEPTEMBER 09:00 – 13:00 CEST (Central European Summer Time)



Opening

09:00 Inauguration of Remtech Europe 2023

Marco Falconi (Remtech Europe), Alessandra Zampieri (Director, JRC, EC), Silvia Paparella (Remtech Expo)

09:20 Introduction from the Chairs

Piotr Wojda (JRC) Marco Falconi (Remtech Europe)

09:30 "Soil Pollution Monitoring, Prevention and Remediation Policies Perspective"

- o State of play of the Soil Monitoring Law (tbd, Head of Unit, DG ENV, EC) (30/40 min)
- The role of EUSO in implementing the Soil Monitoring Law (Diana Vieira, Elise van Eynde, Felipe Yunta, Calogero Schillaci, Arwyn Jones, Piotr Wojda, JRC, European Commission)
- S&SbD (Serenella, Fulvio, Giulia)
 - Taxonomy prevention (JRC B5), or Joachim Maes (DG REGIO) or Bauhaus (JRC)
 TBC
 - Soil Mission together with Cities Mission (contaminated sites and remediation, tbd, check with Luis AGRI) TBC
 - Bauhaus Prize on Ukraine project TBC
- **11:00** Panel discussion, stakeholders questions and wrap up, *Piotr Wojda (EC JRC D3)*

11:15 Coffee break

11:30 "Soil Pollution and Remediation: Data and Knowledge Harmonisation"

- Introduction Piotr Wojda (JRC, EC)
- o ARAGORN (Xenia) 15 min
- Mission Soil Pollution Cluster: workshop summary (Edaphos) 20min
- o Urban Soils Systematic review (Calogero Schillaci JRC, EC) 5min
- Soil Pollution State in the EU and its outlook (tbd, Diana Vieira JRC, EC) 5min
- o Nutrients or Pesticides (tbd) 15 min
- Standards in bioremediation TBC

12:45 Discussion and wrap up

Diana Vieira, Elise van Eynde, Felipe Yunta, Calogero Schillaci, Arwyn Jones, Piotr Wojda (EC JRC D3)

13:00 End of the session

Register yourself in the Google form https://forms.gle/F4oSzhe4ASHYuXcD7





SESSION 2 Dredged Sediments

MONDAY 16 SEPTEMBER

14:30 – 19:00 CEST (Central European Summer Time)



Opening

14:30 Introduction from the Chairs

Edith Martinez-Guerra (USACE), Marco Falconi (Remtech Europe)

14:45 Dredged sediments – Part 1

Damarys Acevedo-Acevedo (USACE), Paul Schroeder(USACE), Susan E. Bailey (USACE)

16:25 Panel discussion

Edith Martinez-Guerra (USACE)

16:35 Coffee break

16:50 Dredged sediments – Part 2

Damarys Acevedo-Acevedo (USACE), Paul R. Schroeder(USACE), Susan E. Bailey (USACE)

18:30 Panel discussion

Edith Martinez-Guerra (USACE)

19:00 End of the session

Register yourself in the Google form https://forms.gle/aMdMRBLV8kZa5MQh6

Damarys Acevedo-Acevedo, P.E.

Research Environmental Engineer

Program Manager for the Installation Energy and Water Plan Program Environmental Laboratory - U.S. Army Engineer Research and Development Center

Damarys Acevedo-Acevedo is a research environmental engineer and the interim program manager for the Installation Energy and Water Plan (IEWP) Program in the Environmental Laboratory at the U.S. Army Engineer Research and Development Center (ERDC) in Vicksburg, Mississippi. Mrs. Acevedo-



Acevedo began her career with ERDC in 2008. She conducts research and development (R&D) on new approaches related to ecosystem restoration, sediment management, and water resilience, and introduces novel approaches to existing procedures and protocols. As a research environmental engineer, she has provided engineering expertise to cover a broad spectrum of projects including: treatment technologies for sediments, soils, and water, dredged material evaluations, capping of contaminated sediments, beneficial use of dredged material, design for confined disposal facilities (CDFs), coastal vulnerability, ecosystem restoration, thin layer placement of dredged material, and development of IEWPs. She serves as the principal investigator (PI) and co-PI for multiple projects, and currently manages the Installation Energy and Water Plan (IEWP) Program.







Susan Bailey is a research civil engineer with 20 years of experience working in the Environmental Engineering Branch at the USACE Engineer Research and Development part of the Sediment Management Team, she works with sediment and dredged material

Center. As part of the Sediment Management Team, she works with sediment and dredged material management, primarily in support of the USACE navigation mission. Her work includes evaluation of water quality impacts from dredging and placement activities, design and evaluation of placement area capacity, evaluation of contaminant and sediment transport, sediment remediation and developing sustainable solutions. She performs laboratory research and testing, conducts field studies, and performs modeling. Her focus is primarily on modeling dredged material behavior and contaminant transport to evaluate risk related to dredged material placement and management of contaminated sediments. She has a research interest in beneficial use of dredged material and sustainability. She has conducted studies concerning the consolidation behavior of dredged material upon thin layer placement which involved laboratory experiments as well as field evaluation.



Paul R. Schroeder, PhD, PE
Research Civil Engineer
U.S. Army Engineer Research and Development Center, CEERD-EPE

Paul R. Schroeder serves as the Sediment Management Team Leader in the Environmental Engineering Branch of the U.S. Army Engineer Research and Development. Over the last 40+ years Dr. Schroeder has worked on hundreds of projects related to dredged material management, modeling of sediment/dredged material behavior, design of dredged material placement operations and facilities, laboratory testing for beneficial use applications, laboratory and desktop evaluations of environment effects of dredging operations, and sediment remediation design. He has co-authored more than 200 publications and presentations in the area of dredging and dredged material disposal and remediation of contaminated sediments, including all of the current USACE guidance documents for evaluation of dredged material management alternatives, and dredging and dredged material disposal. Additionally, he has developed 10 models for the ADDAMS dredging toolbox for evaluating and managing dredged material.





RNEST, session spéciale francophone: comment évaluer la santé des sols?

TUESDAY 17 SEPTEMBER
09:00 – 11:10 CEST (Central European Summer Time)



RNEST, session spéciale francophone: comment évaluer la santé des sols?

Ouverture

- **09:00** Introduction par les modérateurs ; présentation de RNEST, réseau scientifique pour les sols Laurent THANNBERGER (Valgo, RNEST), Flavien POINCOT (ACTA)
- **09:10** Pour une approche fonctionnelle de l'évaluation de la santé des sols *Alain Brauman (IRD, président de l'AFES)*
- **09:30** Pour une approche sensible de la santé des sols *Lola RICHELLE (IRD)*
- **09:50** Bocages sahéliens et haies vives : clés pour renforcer la santé des sols en Afrique de l'Ouest Nanawendin Yameogo (Université JOSEPH KI-ZERBO)
- **10:10** Mieux connaître la biodiversité des sols urbains : retour d'expériences en France *Jérôme CORTET (Université Montpellier 3)*
- 10:30 Diagnostiquer la qualité microbiologique des sols pour évaluer l'impact des usages urbains et agricoles sur la santé des sols Lionel RANJARD (INRAE)
- 10:50 La restitution des résidus d'abattage favorise la restauration rapide de la santé des sols dans les replantations d'hévéas en Côte d'Ivoire Kouakou Kouakou Aymard (Université NANGUI ABROGOUA)

11:10 Fin de la session

Inscrivez-vous dans le formulaire Google https://forms.gle/Y6Lm7pS4UFnTMAMq6





SESSION 4 Monitored Natural Attenuation (MNA)

TUESDAY 17 SEPTEMBER 09:00 – 11:00 CEST (Central European Summer Time)



Opening

09:00 Introduction from the Chairs
Nicola Harries (CL:AIRE) Marco Falconi (Remtech Europe)

09:10 Monitored Natural Attenuation (MNA) James Rayner (Geosyntec, CL:AIRE)

10:50 Panel discussion, stakeholders questions and wrap up, Nicola Harries (CL:AIRE)

11:00 End of the Training

Register yourself in the Google form https://forms.gle/txxdkSxvREu5FMfE6

Monitored natural attenuation (MNA) can be a sustainable risk management strategy for a wide range of groundwater contaminants, where environmental data are collected and assessed that demonstrate natural attenuation will protect receptors from pollution or harm. Natural attenuation refers to the combination of physical, chemical and biological processes that act, without human intervention, to reduce contaminant concentrations, flux or toxicity.

Significant scientific advances have been made in understanding contaminant behaviour and reactive transport in the subsurface, alongside ongoing developments in site characterisation, monitoring and predictive modelling approaches and technologies, that are captured in this updated guidance (Download the here for free (https://claire.co.uk/component/phocadownload/category/22-important-industry-documents?download=993:mna-guidance)



James Rayner -Geosyntec, CL:AIRE





SESSION 5 Natural Source Zone Depletion (NSZD)

TUESDAY 17 SEPTEMBER
11:30 – 13:30 CEST (Central European Summer Time)



Opening

- 11:30 Introduction from the Chairs
 Nicola Harries (CL:AIRE) Marco Falconi (Remtech Europe)
- **11:40** Natural Source Zone Depletion (NSZD) James Rayner (Geosyntec, CL:AIRE)
- 13:20 Panel discussion, stakeholders questions and wrap up, Nicola Harries (CL:AIRE)
- **13:30** End of the Training

Register yourself in the Google form https://forms.gle/hraeTcck4GSMS8DL7

Natural source zone depletion (NSZD) can be a sustainable risk-management strategy for petroleum hydrocarbon light non-aqueous phase liquids (LNAPLs) impacting the subsurface. NSZD refers to the combination of naturally occurring processes – biodegradation, vaporisation, volatilisation and dissolution – that act to reduce LNAPL mass, saturation and mobility in the subsurface.

Recent advances in NSZD are captured in this CL:AIRE document (download here for free (https://claire.co.uk/component/phocadownload/category/22-important-industry-documents?download=992:nszd-guidance), alongside a decision-making framework, to provide technical guidance for practitioners, regulators and liability owners on the science and practical considerations for the application of NSZD-based risk management strategies



James Rayner -Geosyntec, CL:AIRE





PFAS in Consumer Products Stakeholder Engagement

TUESDAY 17 SEPTEMBER 14:30 – 15:30 CEST (Central European Summer Time)



Opening

14:30 Welcome from ASTM International and Remtech Europe Tim Haley (ASTM International), Stephanie Fiorenza (ASTM International), Moly Lynyak (ASTM International) Marco Falconi (ISPRA, Remtech Europe)

Presentations

14:40 PFAS in Consumer Products Rock Vitale (Environmental Standards, Montrose Environmental Group, ASTM International)

15:30 Questions and Answers Stephanie Fiorenza (ASTM International) Marco Falconi (ISPRA, Remtech Europe)

22:00 End of the training

Rock Vitale

Register yourself in the Google form https://forms.gle/jvu7BfBvUqQLSmFF8

High-performance liquid chromatography coupled with tandem mass spectrometry (LC/MS/MS) has the capability of identifying and quantitating analytes at sub-parts per trillion (ppt) levels in clean matrices such as drinking water. With the various definitions of per- and polyfluoroalkyl substances (PFAS) evolving, we are at the point where over 7 million compounds (by one definition) are now being called PFAS. While there is the availability of domestic and international published/consensus methods to test drinking water, non-potable water, soil/sediment, tissue, and other environmental matrices, there is a lack of consensus and/or published test methods that can be used to identify and quantify PFAS in Consumer and Related Articles. This continues to be important as there are questions concerning the presence of PFAS in, and potential exposure to PFAS from, a variety of consumer products.

Compounding this method problem, even with sophisticated LC/MS/MS instrumentation available for speciated PFAS analysis, there are only a small number of target analyte compounds that have reliable reference standards to enable quantitative analysis. Therefore, every PFAS compound or precursor compound (e.g., total oxidizable precursors [TOPs]) for which there is no reference standard represents a potential interference when analyzing PFAS target analytes. Because of the significant number of non-target PFAS, proxy organic fluorine methods (e.g., combustion ion chromatography [CIC]) have been developed that are intended to represent "total PFAS."

This training will include an overview of PFAS, definitions, history of use, and analysis in environmental media, as well as the formation, members, and current status of ASTM F15.81 - PFAS in Consumer Products. Also included will be an overview of the ASTM subcommittee, the work items in progress, why to test/why not to test for PFAS, how to test, and recommended best practices.





SESSION 7 Assessment of NAPL Ebullition in Sediments with a **Flux Chamber**

TUESDAY 17 SEPTEMBER 15:30 – 16:30 CEST (Central European Summer Time)



Opening

15:30 Welcome from ASTM International and Remtech Europe Stephanie Fiorenza (ASTM International) Marco Falconi (ISPRA, Remtech Europe)

Presentations

- 15:35 Assessment of NAPL Ebullition in Sediments with a Flux Chamber Amy Corp (Anchor QEA), Raja Kaliappan (Jacobs)
- **16:20** Questions and Answers Stephanie Fiorenza (ASTM International) Marco Falconi (ISPRA, Remtech Europe)
- 16:30 End of the training

Register yourself in the Google form https://forms.gle/eWGaaatnHgVUduhT8



Amy Corp



Raja Kaliappan





SESSION 8 Toxicity Testing with the Mayfly

TUESDAY 17 SEPTEMBER 16:30 – 17:30 CEST (Central European Summer Time)



Opening

16:30 Welcome from ASTM International and Remtech Europe Stephanie Fiorenza (ASTM International) Marco Falconi (ISPRA, Remtech Europe)

Presentations

- **16:35** Toxicity Testing with the Mayfly David J. Soucek (U.S. Geological Survey, ASTM International)
- 17:20 Questions and Answers Stephanie Fiorenza (ASTM International) Marco Falconi (ISPRA, Remtech Europe)
- **17:30** End of the training

Register yourself in the Google form https://forms.gle/w9XdbPCvXXrrTZ7CA



David J. Soucek





A Combination of Three Standards on Storage Tanks

TUESDAY 17 SEPTEMBER 17:30 – 18:30 CEST (Central European Summer Time)



Opening

17:30 Welcome from ASTM International and Remtech Europe Stephanie Fiorenza (ASTM International) Marco Falconi (ISPRA, Remtech Europe)

Presentations

- 17:35 A Combination of Three Standards on Storage Tanks Pat Rounds (PMMIC Insurance, ASTM International)
- 18:20 Questions and Answers Stephanie Fiorenza (ASTM International) Marco Falconi (ISPRA, Remtech Europe)
- **18:30** End of the training

Register yourself in the Google form https://forms.gle/i7FX6Q9yF1vmRTDs5



Pat Rounds





SESSION 10 Stakeholder Engagement

TUESDAY 17 SEPTEMBER 18:30 – 19:30 CEST (Central European Summer Time)



Opening

18:30 Welcome from ASTM International and Remtech Europe

> Molly Lynyak, Stephanie Fiorenza (ASTM International) Marco Falconi (ISPRA, Remtech Europe)

Presentations

- **18:35** Stakeholder Engagement Paul Sonnerfeld (ASTM International)
- 19:20 Questions and Answers Stephanie Fiorenza (ASTM International) Marco Falconi (ISPRA, Remtech Europe)
- 19:30 End of the training

Register yourself in the Google form https://forms.gle/wtoDetdzdj22TMRP8



Paul Sonnerfeld





SESSION 11 Drone Technology for Site Assessment

TUESDAY 17 SEPTEMBER 20:00 – 22:00 CEST (Central European Summer Time)



Opening

20:00 Welcome from ASTM International and Remtech Europe Stephanie Fiorenza (ASTM International) Marco Falconi (ISPRA, Remtech Europe)

Presentations

20:05 Drone Technology for Site Assessment Jim Bartlett (Bureau Veritas, ASTM International), Mike Sowinski (Terradex, ASTM International)

21:50 Questions and Answers Stephanie Fiorenza (ASTM International) Marco Falconi (ISPRA, Remtech Europe)

22:00 End of the training

Register yourself in the Google form https://forms.gle/CUycbSZWZLnCMy6N9



Jim Bartlett



Mike Sowinski





SESSION 12 Risk Assessment



WEDNESDAY 18 SEPTEMBER 09:00 – 11:00 CEST (Central European Summer Time)

Opening

09:00 Welcome from ALGA and Remtech Europe

Vicki Pearce (Ventia, ALGA), Matthew Potter (ALGA), Marco Falconi (ISPRA, Remtech Europe)

Presentations

09:10 Introduction to human health risk assessment (HHRA) of contaminated sites

- Background, concepts
- Conceptual site models
- Terminology

Victoria Lazenby (Terravale, ALGA)

09:40 International guidance and available resources to support HHRA

- Available screening criteria
- How screening criteria are derived
- Exposure parameters and toxicity values

Victoria Lazenby (Terravale, ALGA), Carolyn Brumley (Senversa, ALGA)

10:30 Worked example from a contaminated site

- Consideration of exposure pathways
- Comparison of site data with criteria
- How criteria can be adjusted to be more site specific

Carolyn Brumley (Senversa, ALGA)

10:50 Questions and Answers

Vicki Pearce (Ventia, ALGA), Matthew Potter (ALGA), Marco Falconi (ISPRA, Remtech Europe)

11:00 End of the training

Register yourself in the Google form https://forms.gle/xkWLb1A435WZZAiZ8



PFAS risk assessment and management

WEDNESDAY 18 SEPTEMBER
09:00 – 11:10 CEST (Central European Summer Time)



Opening

09:00 Welcome from *Dietmar Müller-Grabherr (COMMON FORUM), Nicola Harries (CL:AIRE), Julie Lions (BRGM)*

Presentations

- **09:05** The "Forever Pollution" database (le Monde): the presence of perfluoroalkyl substances (PFAS) in Italian groundwater and surface water and the use of concentration ratios as tracers of their origin

 Stefano Fabiano (University of Venice Ca Foscari), Maurizio Guerra, Marco Falconi (ISPRA)
- **09:20** Managing PFAS Contaminated Land/Sites strategic approach in Austria *Gernot Döberl, Martin Weisgram (Environment Agency Austria (EAA))*
- **09:35** Mapping and investigation of PFAS suspected sites in Flanders *Johan Ceenaeme (OVAM (Public Waste Agency of Flanders))*
- **09:50** Biological aspects of PFAS contamination and remediation

 Emilio Brivio Sforza, Valeria Tatangelo, Sara Villa, Andrea Franzetti, Valeria Mezzanotte

 (University Milano Bicocca)
- **10:05** Summary of a comparative study of PFAS contaminated soil management *Katrine Smith (WSP for Danish EPA)*
- **10:20** Properly assessing PFAS risk: the SGS PFASafe®2.0 approach Luca Fagiuoli, Pieter Joos, Luc de Ren (SGS Group)
- **10:35** Effective and sustainable PFAS treatment for aggressive landfill leachates using Foam fractionation

 Robin Axelson, Helena Hinrichsen (Envytech)
- 10:50 Panel discussion moderated by chairs
- 11:10 End of the session

Register yourself in the Google form https://forms.gle/D9L8D3RdvLccWdhM6







SESSION 14 Biochar and soil amendments

WEDNESDAY 18 SEPTEMBER
09:00 – 11:00 CEST (Central European Summer Time)

Europe Room 2° floor

Opening

09:00 Welcome from *Piotr Wojda (JRC-EC), Elena Stefanoni (UNEP), Nazaré Couto (CENSE,PT)*

Presentations

- **09:05** Application of Multiyear Miscanthus Phytotechnology Supported by Soil Amendments to the Post-Military/Post-Mining Land: case of Chomutov, Czech Republic Robert Ato Newton, Valentina Pidlisnyuk (Purkyně University), Sergey Ust'ak, Vojtech Vana (Crop Research Institute) Aigerim Mamirova (Al-Farabi Kazakh National University)
- **09:20** Simultaneous removal of Cd(II) and As(V) by ferrihydrite-biochar composite: Enhanced effects of As(V) on Cd(II) adsorption

 Changxun Dong (Nanjing Agricultural University)
- **09:35** Application of ash as a soil amendment in phytoremediation

 Abdulmannan Rouhani, Valentina Pidlisnyuk, Karim Suhail Al Souki (Purkyně University)
- **09:50** Pyrolysis temperature effects on wood-derived biochar and its potential for organic pollutant removal from water

 Tamara Apostolović, Nina Đukanović, Tajana Simetić, Jasmina Anojčić, Sanja Mutić, Snežana Maletić, Jelena Beljin (University of Novi Sad)
- 10:05 A nature-based approach to enhance the recovery potential of a spontaneous ecosystem developed on an urban contaminated site

 Laura Passatore, Paolo Sconocchia, Massimo Zacchini (IRET-CNR), Gianluca Rapaccini, Stefano Zoli (Terrapreta), Massimiliano Baric, Tatiana Stella (M3R-Monitoring and Management of Microbial Resources)
- 10:20 Remediation approaches for degraded military-polluted lands: case of Ukraine Valentina Pidlisnyuk (Purkyně University), Larry Erickson, Ganga Hettiarachichi (Kansas State University), Tatyana Stefanovska (University of Life and Environmental Sciences of Kyiv), Sergey Ust'ak (Crop Research Institute), Pavlo Shapoval (Lviv Polytechnic National University)
- **10:35** Panel discussion moderated by chairs
- 11:00 End of the session

Register yourself in the Google form https://forms.gle/xyy4khAfRRyPwZgbA





Drones, artificial intelligence and new frontiers in characterization

WEDNESDAY 18 SEPTEMBER 11:30 – 13:45 CEST (Central European Summer Time)



Opening

11:30 Welcome from Pavlos Tyrologou (EFG), Laurent Thannberger (RNEST) Erika von Zuben (AESAS)

Presentations

- 11:35 Real-fime groundwater sensor networks for sustainable land and water use in changing Marjan Joris, Jeroen November, Niels Van Putte, Goedele Verreydt (iFLUX)
- 11:50 UVOST® technology and laboratory analysis, a combined approach for a reliable environmental investigation Claudio Carusi, Luca Moresi, Federica De Santis (Mares), Marcello Pianu, Fabio Allegrini (ENI), Eugen Martac (Fugro)
- **12:05** Drone applications in situ characterization/remediation Jasper Schmeits (TAUW), Bob van der Meij, Jasper Mink (GeoZICHT)
- **12:20** Navigating New Frontiers: The Role of Artificial Intelligence (AI) in Environmental Innovation B.J. Min (TRIUM Environmental/ecoAl innovates)
- 12:35 Collection of High-Definition Screening Data to Streamline the Evaluation of Subslab Conditions at Vapor Intrusion Sites - A Case Study Craig Cox (Cox-Colvin & Associates)
- **12:50** GroundWater Spatiotemporal Data Analysis Tool Wayne Jones, Luc Rock (Shell)
- **13:05** Use of smart wells in the execution of DPE and P&T remediation pilot tests Pedro Rosado, André Souza, André Pozzetti, Majhal Pinheiro (CETREL))
- **13:20** Panel discussion moderated by chairs
- **13:45** End of the session

Register yourself in the Google form https://forms.gle/W3U9XddmzDKFEuHf8















Healthy soil and the Soil Monitoring Law

WEDNESDAY 18 SEPTEMBER
11:30 – 13:30 CEST (Central European Summer Time)

Europe Room
2° floor

Opening

11:30 Welcome from Dietmar Müller-Grabherr (COMMON FORUM), Antonella Vecchio (ISPRA), Elena Stefanoni (UNEP)

Presentations

- 11:35 Soil Pollution in the European Union
 Diana Vieira, Felipe Yunta, Panos Panagos, Arwyn Jones, Piotr Wojda (JRC European
 Commission)
- **11:50** A European approach for Healthy soils a reflection from Germany *Jörg Frauenstein (Umweltbundesamt (Germany))*
- **12:05** The EU soil directive: a reflection from Italy *Francesca Assennato (ISPRA, Italy)*
- **12:20** Towards a EU Soil Monitoring Law and comprehensively managing contaminated land Dietmar Müller-Grabherr (COMMON FORUM on Contaminated Land in Europe, Environment Agency Austria (EAA))
- **12:35** The EU soil directive: a reflection from the Belgium *Johan Ceenaeme (OVAM)*
- 12:50 Contaminated sites management in the Western Balkans (with a focus on Bosnia and Herzegovina and Serbia)

 Aleksandra Šiljić Tomić (UNEP Serbia), Matea Grabovac (UNEP Bosnia Herzegovina)
- **13:05** Panel discussion moderated by chairs
- 13:30 End of the session

Register yourself in the Google form https://forms.gle/YGcanHS5T3HTmTkZ6







3D and High Resolution Characterization Techniques

WEDNESDAY 18 SEPTEMBER 14:30 – 16:30 CEST (Central European Summer Time)



Opening

14:30 Welcome from Piotr Wojda (JRC-EC), Laurent Thannberger (RNEST), Wouter Gevaerts (NICOLE)

Presentations

- 14:35 Controlling risks during industrial construction works through sustainable and data-driven groundwater management using real-time monitoring of groundwater flows Marjan Joris, Timothy De Kleyn (iFLUX), Steven Van den Bussche, Karen Van Geert (Arcadis)
- 14:50 Real-Time ISCO Scaling Using HRSC Elisandra Hernandes da Fonseca, Felipe Pereira de Sisto, José Eduardo Blanco Querido, Carlos Cesar Malta de Oliveira, Sandro Souto de Souto (Finkler Ambiental)
- **15:05** Three dimensional site conceptual models (3D CSM) Willem J.M. Havermans (TAUW)
- **15:20** Three-dimensional contaminant modeling in thermal remediation for performance assessment Marcelo Silveira, Aline Setti, Edson Arakaki, Jonas Oliveira, Isabela Lima (Worley)
- 15:35 MIP-OMS experiences after one year of deployment: On-site mass spectrometry based highresolution characterization technology with continuous monitoring of individual contaminant species Eugen Martac (Fugro), Claudio Carusi (Mares)
- 15:50 Panel discussion moderated by chairs
- 16:30 End of the session

Register yourself in the Google form https://forms.gle/76FLB8qhEYMum22j6















Sustainable remediation and national programs

WEDNESDAY 18 SEPTEMBER 14:30 – 16:45 CEST (Central European Summer Time) Europe Room
2° floor

Opening

14:30 Welcome from Jörg Frauenstein (Umweltbundesamt), Nicola Harries (CL:AIRE), Johan Ceenaeme (OVAM)

Presentations

- **14:35** A circular economy case history for a quarry restoration Sara Ceccon, Aldo Trezzi, Mara Moggia (Ramboll), Elisa Bizzotto (Fondazione Ca' Foscari)
- 14:50 Sustainable Remediation of Aluminium Smelter Waste A Case Study of Hydro Aluminium Kurri Kurri Smelter

 Kirsty Greenfield (Ramboll), Andrew Walker (Hydro Aluminium Kurri Kurri Australia)
- 15:05 Sustainable Remediation Strategies and Community Engagements in Niger Delta Oil Spill Sites: A Path to Resolving Environmental and Socioeconomic Challenges

 Mariam Yahaya-Shiru, Yusuf O. Rigasa, Chizoba Okorie Kama, Enogenyi Aunam (Nigerian National Oil Spill Detection And Response Agency (NOSDRA))
- **15:20** ESG Law & Policy in 2024: climate considerations for contamination management & sustainable remediation Gabrielle Guthrie (Guthrie Legal)
- 15:35 The Austrian program for Historically Contaminated sites new legal incentives and a paradigm shift

 Dietmar Müller-Grabherr, Gernot Döberl (Environment Agency Austria (EAA))
- **15:50** Understanding the synergies between Port Receiving Facilities and Contaminated Land Remediation

 Joshua A. Kelly, Manel Fernandez (LAMOR)
- **16:05** Contaminated land management in Türkiye *Burak Deveci (BCA Group)*
- **16:20** Panel discussion moderated by chairs
- **16:45** End of the session

Register yourself in the Google form https://forms.gle/DKU967HX2iSyx4Ca8











In situ thermal remediation

WEDNESDAY 18 SEPTEMBER 17:00 – 19:00 CEST (Central European Summer Time)



Opening

17:00 Welcome from *Dietmar Müller-Grabherr (COMMON FORUM), Pavlos Tyrologou (EFG), Thiago Gomes (AESAS)*

Presentations

- 17:05 Thermal desorption of mercury: steps to full scale

 Matthieu Sangely, Laurent Thannberger (Valgo), Pierre-Louis Guillerm (Ramboll)
- 17:20 In-Situ Thermal and Bioremediation of a CVOC Source Zone in South America: Challenges and Findings"

 Sadjad Mohammadian, Ralf Engelhardt (TAUW), Pedro Aquino, David Forster (EPA Engenharia de Proteção Ambiental)
- 17:35 Thermal Conduction Heating Case Studies: Reducing Heat Losses, Groundwater Management, and Lessons Learned

 Clayton Campbell (McMillan-McGee)
- 17:50 In situ Conductive Heating to Enhance Long-chain LNAPL Recovery

 Thomas Meyer, Philipp Schiphorst, Alessandro Raffaldi, Paolo Boitani (Zueblin Umwelttechnik)
- **18:05** Optimizing data processing during thermal remediation using a POWER BI dashboard *Jonas Oliveira, Aline Setti, Edson Arakaki, Isabela Lima (Worley)*
- **18:20** Computational simulation of in situ Thermal Conductive Heating for soil remediation to predict process performance: preliminary results

 Filippo Fazzino, Stefano Mauro, Federico Vagliasindi, Pietro Paolo Falciglia (University of Catania)
- **18:35** Panel discussion moderated by chairs
- 19:00 End of the session

Register yourself in the Google form https://forms.gle/T6uEL5tmmoD7C3AF9











Bioremediation and nature-based solutions

WEDNESDAY 18 SEPTEMBER

17:00 – 19:10 CEST (Central European Summer Time)

Europe Room
2° floor

Opening

17:00 Welcome from Johan Ceenaeme (OVAM), Victoria Lazenby (ALGA), Stephanie Fiorenza (ASTM International)

Presentations

- 17:05 Soil bioremediation efficiency: the impact of bioaugmentation and mineral or green compost additive in PAHs and TPH contaminated soil

 Nicolas Martin, Malgorzata Grybos, Thibaut Le-Guet, Fabrice Dupuy, Emmanuel Joussein (Université de Limoges)
- 17:20 Microbiomes for the depletion of hexacholorocyclohexane in contaminated environments: the power of biodiversity

 Giacomo Bernabei, Giampiero De Simone, Simone Becarelli, Riccardo Di Mambro, Simona Di Gregorio (BIOUNIPI, University of Pisa), Alessandro Gentini (Teseco Bonifiche)
- **17:35** Laboratory degradation tests as first step for the design of a bioremediation strategy *Federica Brogioli, Cosimo Masini (DND Biotech)*
- 17:50 LIFE NARMENA: Nature Based Remediation Techniques for heavy metals in sediment Constructed Wetlands monitoring post works of the Winterbeek site Axelle Mineur, Jan De Vos (ABO Group), Froukje Kuijk (OVAM), Karel Viaene (ARCHE)
- 18:05 Comparative Analysis of Lignin Peroxidase and Laccase Activities in the Presence of Graphene-Related Nanomaterials

 Humberto Castillo-González, Fabio Candotto-Carniel, Mario Mardirossian, Mauro Tretiach (University of Trieste)
- 18:20 Enhanced remediation of LNAPL-contaminated soil using polymer-alcohol emulsion Bexultan Sabyrbay, Fabien Lion, Dorian Davarzani, Stéfan Colombano (BRGM), Christophe Dicharry (Université de Pau et des Pays de l'Adour (UPPA)), Sagyn Omirbekov (Nazarbayev University), Mélanie Lorthioy, Mohamed Krimissa (EDF)
- 18:35 Microbial characterization of multicontaminated marine sediments in Mar Piccolo Site (Taranto, Italy) and selection of aerobic and anaerobic hydrocarbondegrading bacteria Bruna Matturro, Barbara Tonanzi, Federico Aulenta (NBFC), Maria Letizia Di Franca, Carolina CruzViggi, Magda Di Leo, Santina Giandomenico, Simona Rossetti (CNR-IRSA)
- **18:50** Panel discussion moderated by chairs
- 19:10 End of the session

Register yourself in the Google form https://forms.gle/KoNd4t9rM9foiXGF8











PROMISCES: PFAS treatment technologies for contaminated sites: soils, sediments and groundwater

WEDNESDAY 18 SEPTEMBER 14:30 – 18:30 CEST (Central European Summer Time)

Blue Room 1° floor

Opening

14:30 Welcome from *Marco Falconi (ISPRA)* and introduction from the Chairs, *Stéfan Colombano (BRGM)*, *Eric van Hullebusch (IPGP)*

14:30 Session: part 1 (15 min talk + 5 min questions)

- 1) "Mass balance: determination of "total PFAS" & sampling strategies" (speakers : Julie Lions, BRGM and Thomas J. Oudega, TU Vienna)
- 2) "Toxicity effect- based bioanalysis of PFAS in the water cycle" (speaker: Peter Behnish, BDS)
- 3) "Fate and transport of PFAS in porous media" (speakers: Annemieke Marsman, Deltares, Thomas J. Oudega, TU Vienne and Nicolas Devau, BRGM)
- 4) "Mobilization of PFAS from Heterogeneous Soils: Desorption By Alcohol/Bio-Polymer Mixture" (speaker: Ali Batikh, Colas Environnement)
- 5) "Feasibility of on-site treatment of PFAS contaminated groundwater: lessons learned" (speakers: Jéssica Meijide, Sònia Jou Claus, EURECAT)

16:10 <u>Coffee Break</u>

16:40 <u>Session: part 2 (15 min talk + 5 min questions)</u>

- 1) "Pilot scale evaluation of advanced technologies for PFAS removal during landfill leachate treatment" (speaker: Ali Hydar, UNIVPM)
- 2) "Effects of plasma treatment of PFAS in model liquids and in leachate of PROMISCES project" (speaker: Evgenia Benova, University of Sofia)
- 3) "Insight into PFOA degradation using DMSO/NaOH" (speaker: Stéphanie Betelu, BRGM)
- 4) "Ultrasonic cavitation technology for on-site treatment of PFAS contaminated groundwater" (speaker: Debabrata Panda, IPGP)
- 5) "Transfer and removal of PFAS during treatment and valorization of dredged sediments" (speaker: Massimiliano Sgroi, UNIVPM)
- 6) Wrap-up session by session chairs (speakers: Stéfan Colombano and Eric van Hullebusch) 10'

18:30 end of the session

Free Registration for participation online and in presence https://forms.gle/7kbbbsKw8TpMLvsr5





SESSION 22 LIFE MY SOIL

THURSDAY 19 SEPTEMBER 09:00 – 13:00 CEST (Central European Summer Time)

Opening

09:00 Welcome to participants

09:10 Introduction from Marco Falconi (Remtech Europe coordinator, ISPRA)

09:20 Session 1 "Mycoremediation"

- Mycoremediation: a 15-year long story of recalcitrant pollutants treatment by fungi (Tatiana Stella, M3R-Monitoring and Management of Microbial Resources)
- Microbial interactions involved in bioremediation of benzo(a)pyrene by the fungus Talaromyces helicus in soil (Salomé Bertone, University of Technology of Compiègne)
- Comparative analysis of lignin peroxidase and laccase activities in the presence of graphenerelated nanomaterials (Humberto Castillo-González, University of Trieste)

10:20 Round table and Q&A

10:40 Coffee break

11:10 Session 2 "The LIFE MySOIL project"

- Introduction to the LIFE MySOIL project (Jofre Herrero, Eurecat)
- LIFE MySOIL: From biotreatability test to process transferability: the Italian experience (Fiora Bagnato, Eni Rewind; Silvia Crognale, University of Tuscia)
- LIFE MySOIL: From biotreatability test to process transferability: the French experience (Laurent Thannberger, VALGO; Ilaria Chicca, Novobiom)
- LIFE MySOIL: From biotreatability test to process transferability: the Spanish experience (Rafael Antón Herrero, Universidad Autónoma de Madrid; Jorge Miguel Diamantino, Kepler)
- MYCOTRAP: a novel approach to assess soil mycoremediation (Anko Fischer, Isodetect)

12:40 Round table and Q& A

13:00 End of the session

Free Registration for participation online and in presence https://forms.gle/U6vTHViRDYekqQhH6

Blue Room 1° floor



Groundwater remediation

THURSDAY 19 SEPTEMBER 09:00 – 11:00 CEST (Central European Summer Time) White Room 1° (1000°

Opening

09:00 Welcome from *Dietmar Müller-Grabherr (COMMON FORUM), Nicola Harries (CL:AIRE),* Robert Jelinek (Slovak State Geological Institute)

Presentations

- **09:05** Protection of the groundwater resource by reusing water collected in the hydraulic barrier during the industrial production cycle and cheese whey injection interventions. Case study Laura Quintarelli, Riccardo Di Lorenzo, Matteo Capelli, Marco Gardini (Ramboll)
- 09:20 IEG-GCW® and C-Mix Synergy: A pioneering Approach Niloufar Falakbaz, Eduard J. Alesi (IEG Technologie)
- **09:35** Application of bacterial remediation products in an oil-water interceptor at a motorway depot in the UK Bastian Saputra, Cecilia MacLeod (Advanced Bacterial Sciences (ABS))
- 09:50 Electro-nanobioremediation Technology for In-situ Degradation from Low Permeable Aquifer Vojtech Antos, Vaclav Sredl, Petr Kvapil (Photon Water Technology), Jaroslav Nosek, Tomas Pluhar (Technical University of Liberec), Pierre Matz, Salvador Asensio Gimenez, Jose-Javier Garrido (SOLVAY)
- **10:05** Re-purposing legacy lagoons as an engineered wetland system Nicoletta Cavaleri (Jacobs)
- 10:20 New Integrated Biogeochemical /Electrochemical Method for Remediation of Contaminated Groundwater Elie Elgressy, Gil Elgressy (E.Elgressy) Troy Lizer, Will Moody (Provectus)
- 10:35 Panel discussion moderated by chairs
- 11:00 End of the session

Register yourself in the Google form https://forms.gle/fNqK3Rt9LF16vram8















SESSION 24 Heavy metals and POPs

Europe Room
2° floor

THURSDAY 19 SEPTEMBER

09:00 – 11:20 CEST (Central European Summer Time)

Opening

09:00 Welcome from Johan Ceenaeme (OVAM), Victoria Lazenby (ALGA), Pavlos Tyrologou (EFG)

Presentations

- **09:05** Phyto-evaluation of Cd-Pb using tropical plants in hydrotoxic soil-leachate conditions *Chuck Chuan (Xiamen University Malaysia)*
- **09:20** Potential application of phosphogypsum for sediment remediation
 Nataša Slijepčević, Dunja Rađenović, Slaven Tenodi, Dejan Krčmar, Milena Bečelić-Tomin,
 Đurđa Kerkez, Dragana Tomašević Pilipović
- **09:35** Assessment of accumulation of heavy metals in soils of Europe due to diffuse pollution Felipe Yunta, Diana Vieira, Elise Van Eynde, Calogero Schillaci, Panos Panagos, Arwyn Jones, Piotr Wojda (Joint Research Centre European Commission)
- **09:50** Permeable contaminant filters for interrupting pollutant pathways in sediments and soils Stefan Niewerth, Alberto Simini, James Feest (HUESKER Synthetic)
- **10:05** Update in the management and securing of mercury-polluted sites Boris Devic-Bassaget (Sarpi Remediation Europe, Veolia Group)
- **10:20** Thermal Pre- Processing Techniques for Reactive Aluminum Alloy Waste Powders *Piero Ferrari (Brixiambiente), Mentore Vaccari, Roya Biabani (University of Brescia)*
- **10:35** Portable X-Ray Fluorescence Analyzers to Characterize Heavy Metals in Soil: Persistent Arsenic from Historical Sodium Arsenite Application as Herbicide *Silvia Gianetti Barber (Integral Consulting)*
- 10:50 Phytoremediation: a nature-based remediation technology to strengthen natural attenuation processes
 Auroramaria Basile, Maite Tejerina Nunez, Anna De Fina, Ruggero Passaro, Nicola Bentivoglio (WSP)
- **11:05** Panel discussion moderated by chairs
- 11:20 End of the session

Register yourself in the Google form https://forms.gle/emvJTekUv1iFMTjGA











PFAS groundwater remediation

THURSDAY 19 SEPTEMBER

11:30 – 13:45 CEST (Central European Summer Time)

White Room 1° floor

Opening

11:30 Welcome from *Nicola Harries (CL:AIRE), Jörg Frauenstein (Umweltbundesamt), Victoria Lazenby (ALGA)*

Presentations

- 11:35 Photoelectrocatalytic advanced oxidation of PFAS in groundwater and liquid waste Silvia Franz, Alessandro Pietro Tucci (Politecnico di Milano), Massimiliano Bestetti (Tomsk Polytechnic University), Paolo Ronco (Viacqua)
- 11:50 In-situ Electrochemically Enhanced Nanoremediation for PFAS Successful Site Trial Emily Brown, Ian Phillipps, Petr Kvapil, Vaclav Sredl (Photon Water Technology), Jaroslav Nosek (Technical University of Liberec)
- **12:05** Sustainability of PFAS-remediation: Comparison of in situ Barriers and Pump&Treat *Matthias Sumann, Jarno Laitinen (Ramboll), Gareth Leonard, Marcello Carboni (Regenesis)*
- **12:20** Catalytic rehabilitation of PFAS contaminated groundwater. *Rizwan Isap (Oxyle)*
- 12:35 Groundwater and mass FLUX for better groundwater management and tackling emerging contaminants

 Marjan Joris, Erik Bosmans (iFLUX)
- **12:50** Sustainable Surfactant Enhanced Hydrocarbon, Chlorinated Solvent, and PFAS Remediation Resolving Hydro-Geo-Chemical Limitations *George A. Ivey (Ivey International)*
- **13:05** Regenerating Ion Exchange Resins to Reduce the Life Cycle Cost of PFAS Water Treatment Steven Becker, Aaron Kavanagh, John Wilson (SciDev)
- 13:20 Panel discussion moderated by chairs
- 13:45 End of the session

Register yourself in the Google form https://forms.gle/m3b1ub7bGqcRUR616





*Oxyle SCIDEV









SESSION 26 Mining and Soil Remediation Innovations

THURSDAY 19 SEPTEMBER 11:45 – 13:30 CEST (Central European Summer Time)

Europe Room
2° floor

Opening

11:45 Welcome from Dietmar Müller-Grabherr (COMMON FORUM), Johan Ceenaeme (OVAM), Wouter Gevaerts (NICOLE)

Presentations

- **11:50** Converting iron ore tailings into soil like growth medium for ecological rehabilitation Songlin Wu (Chinese Academy of Sciences), Longbin Huang (University of Queensland)
- 12:05 Enhanced Phytoremediation of Polluted Soils in Mining Areas Using Nanoscale Zero-Valent Iron
 Salvador Sánchez, Aida González (Universidad de Oviedo), Diego Baragaño (Instituto de Ciencia y Tecnología del Carbono)
- 12:20 Statistical Analysis, Bioaccessibility and Soil Amendment Addressing Soil Lead Contamination From Mining and Smelting Sources

 Graeme Miller, Jonathan Mann (Senversa)
- 12:35 The influence of low molecular weight organic acids on the uptake and translocation of heavy metals in plants

 Nina Đukanović, Jelena Beljin, Marijana Kragulj Isakovski, Srđan Rončević, Snežana Maletić (University of Novi Sad), Tijana Zeremski, Nadežda Stojanov (Institute of Field and Vegetable Crops)
- 12:50 Exploring the Potential of Reduced Graphene Oxide (rGO) to Mitigate Copper and Nickel Stress in Lemna minor plants

 Marco D'Eugenio (Sapienza University of Rome), Barbara Casentini (IRSA-CNR), M. Adelaide Iannelli (IBBA-CNR)
- **13:05** Panel discussion moderated by chairs
- 13:30 End of the session

Register yourself in the Google form https://forms.gle/T8XMiK11hkzXDKnr8







SESSION 27 Live Demo

THURSDAY 19 SEPTEMBER - 13:30 - 17:30 CEST (Central European Summer Time)

- 13:30 Meeting at Pav. 2 with the chairs: Paola Grenni, Laurent Thannberger, Alessandra Cecconi
- **13:35** The use of Vapor Pin for subslab vapor intrusion measurements *Craig Cox (Cox Colvin)*
- **13:50** UAV systems for metal emission monitoring

 Maurizio De Molfetta, Donatello Fosco (Laboratorio Talsef, University of Bari)
- **14:05** Groundwater Passive Sampling: Snap Sampler® *Andrea Campi, Claudio Sandrone (BAW)*
- 14:20 SOILFLUX Rapid measurements of CO_2/CH_4 (N_2O) fluxes from soil using the accumulation chamber method Luca Berichillo (ECOSEARCH)
- **14:35** Rover e-sentinel 68 autonomous driving, security and environmental monitoring integration and remotisation *Mauro Barompriori (Eni Rewind)*
- 14:50 Moving around the exhibition area
- **15:00** New applications of 3D georadars: dam monitoring, checking tunnel walls, surveying road surfaces and subsoil *Maurizio Porcu, Chiara Faccioli, Mara Giaconi Grassi (Codevintec)*
- 15:20 To be determined

 To be confirmed (to be confirmed)
- 15:40 To be determined

 To be confirmed (to be confirmed)
- 16:00 Moving around the external area
- **16:10** The use of drones in support to land enforcement agencies against environmental crime *Serena Stampachiacchiere (Esercito Italiano)*
- **16:30** Use of UVOST/MIP for High Resolution Site Characterization ClaudioCarusi (Mares), Eugen Martac (Fugro)
- **16:50** To be determined *To be confirmed (to be confirmed)*
- **17:10** To be determined

 To be confirmed (to be confirmed)
- 17:30 End of the session

Register yourself in the Google form https://forms.gle/18rwbeHGzZK38LZ98



SESSION 28 CSIA and genetic in Soil Bioremediation

THURSDAY 19 SEPTEMBER 14:30 – 16:45 CEST (Central European Summer Time)

White Room
1° floor

Opening

14:30 Welcome from Dietmar Müller-Grabherr (COMMON FORUM), Felipe Yunta (JRC-EC), Monica Crisan (IMPEL)

Presentations

- 14:35 From the isolation and characterization of hydrocarbon-oxidizing bacterial strains to the assessment of their capabilities for bioremediation

 Cristina Cavone, Antonio Bucci, Pamela Monaco, Francesca Fantasma, Gino Naclerio (University of Molise), Pietro Rizzo, Fulvio Celico (University of Parma)
- **14:50** Synergism of Endophytic Microbiota and Plants Promotes the Removal of Polycyclic Aromatic Hydrocarbons from the Alfalfa Rhizosphere *Longfei Jiang, Xianghui Cheng, Chunling Luo (Chinese Academy of Sciences)*
- 15:05 Compound-Specific Isotope Analysis (CSIA) to assess bioremediation and source forensics of chlorinated solvents in groundwater: applications and field case studies

 Sergio Gil Villalba, Orfan Shouakar-Stash (Isotope Tracer Technologies Labs), Erica Oldani, Luca Alberti (Politecnico di Milano), Massimo Marchesi (Sapienza University of Rome)
- 15:20 Unveiling complete natural reductive dechlorination mechanisms of chlorinated ethenes in groundwater: Insights from functional gene analysis

 Zhuanxia Zhang, Mukhtiar Ali, Zhiwen Tang, Qi Sun, Qing Wang, Xin Liu, Lipu Yin, Song Yan, Xin Song (Chinese Academy of Science), Minmin Xu (Shandong Academy of Environmental Sciences), Frederic Coulon (Cranfield University)
- **15:35** eDNA: soil microbiome and food health. The case of water reuse *Federica Cattapan (Mérieux NutriSciences)*
- **15:50** Evaluation of pollutant biodegradation and its stimulation at a large-scale industrial site based on the combination of innovative monitoring methods

 *Kevin Kuntze, Anko Fischer (Isodetect) Annika Beckmann (HPC)
- **16:05** Stimulation of electro-active bacteria to degrade petroleum hydrocarbons Azariel Ruiz-Valencia, Angélique Meunier, Timothy M. Vogel (Université Claude Bernard Lyon1)
- **16:20** Panel discussion moderated by chairs
- **16:45** End of the session

Register yourself in the Google form https://forms.gle/6ASp1DDh4A7kZyTV6









Oil and petroleum hydrocarbons

THURSDAY 19 SEPTEMBER

14:30 – 16:45 CEST (Central European Summer Time)

Europe Room 2° floor

Opening

14:30 Welcome from Piotr Wojda (JRC-EC), Victoria Lazenby (ALGA), Robert Jelinek (Slovak State Geological Institute)

Presentations

- 14:35 Phytoremediation Potential of Native Species in Oil-Contaminated Soils of Khuzestan Province, Iran

 Akram Bagheripour (Lorestan University), Ziaedin Badehian (Fasa University, Ebrahim Adham (Yasouj Universit), Mehrdad Zarafshar(Linnaeus university)
- **14:50** Environmental lessons learned from an oil spill Oscar Gómez (Tema Litoclean)
- **15:05** Extended-Release Oxygen Source to treat Petroleum Hydrocarbon Contamination *Brant Smith, Alberto Leombruni (Evonik Active Oxygens)*
- 15:20 LNAPL Infiltration and Redistribution in Heterogeneous Porous Media under Water Table Fluctuations

 Lazzat Amangaliyeva, Maxime Cochennec, Dorian Davarzani, Stéfan Colombano (BRGM), Eric van Hullebusch (Université Paris Cité), Nurzhaugan Omiraliyeva, Sagyn Omirbekov (Nazarbayev University, Kazakhstan)
- 15:35 An ISCO remediation case in the mountains of colombia

 MSc. María José Villalobos, MSc. Eglee Borregales, Alberto Uribe Jongbloed, Sebastián

 Castellanos (Novambientti Soluciones Ambientales)
- **15:50** Microbial Electrochemical Snorkels to boost anaerobic oxidation of petroleum hydrocarbons *Gabriele Beretta, Elena Sezenna, Sabrina Saponaro (Politecnico di Milano)*
- **16:05** Not All Is As It Seems Reinvestigating A Persistent Benzene Plume Using HRSC *Graeme Miller, Emma Walsh (Senversa)*
- **16:20** Panel discussion moderated by chairs
- 16:45 End of the session

Register yourself in the Google form https://forms.gle/7WzjPyaKWSkSR5Um8











Light Non-Aqueous Phase Liquid site management: decision process and remedial technologies

THURSDAY 19 SEPTEMBER 17:00 – 19:00 CEST (Central European Summer Time)



Opening

17:00 Welcome from Interstate Technology Regulatory Council (ITRC) and Remtech Europe
Charles Reyes (ITRC Director), Claudio Sorrentino (DTSC, ITRC), Marco Falconi (ISPRA, Remtech
Europe)

Presentations

17:05 Light, Non-Aqueous Phase Liquids (LNAPL): Using Science to Manage Sites

Tom Fox (Colorado Department of Public Health and
Environment); Andrew Kirkman (BP); Matthew Lahvis (Shell);
Lloyd Dunlap (Retired)

18:50 Questions and Answers

Claudio Sorrentino (DTSC, ITRC), Marco Falconi (ISPRA, Remtech Europe)



19:00 End of the training

Register yourself in the Google form https://forms.gle/d9hwC4MbJHPjgxe78

BRIEF DESCRIPTION OF THE TRAINING

ITRC's LNAPLs (Light Non-Aqueous Phase Liquids) training is based on the ITRC guidance: <u>LNAPL Site</u> <u>Management: LCSM Evolution, Decision Process, and Remedial Technologies</u> (LNAPL-3, 2018) and focuses on connecting the science to managing LNAPL sites and helping you to:

- Build upon your Understanding of LNAPL Behavior in the Subsurface
- Develop your LNAPL Conceptual Site Model and LNAPL Remedial Goals
- Select/Implement LNAPL Technologies

After this training, the expectation is that you will have the skills and understanding to use ITRC science-based resources to improve decision making at your LNAPL sites. For regulators and other government agency staff, this improved understanding can hopefully be incorporated into your own LNAPL programs.

It is recommended that participants have a general understanding of hydrogeology and some familiarity with petroleum contaminated sites. The course will build on your existing LNAPL knowledge and outline the framework for making LNAPL remediation and management decisions.



SESSION 31 Chlorinated solvents remediation

White Room 1° floor

THURSDAY 19 SEPTEMBER

17:00 – 19:00 CEST (Central European Summer Time)

17:00 Welcome from *Nicola Harries (CL:AIRE), Jörg Frauenstein (Umweltbundesamt), Iason Verginelli (Tor Vergata University)*

Presentations

- 17:05 Enhancing Reductive Dechlorination of Trichloroethylene in Bioelectrochemical Systems with Conductive Materials

 Suhao Chen, Zhengtao Li, Heping Zhao (Zhejiang University)
- 17:20 Combined strategies for trichloroethylene-contaminated groundwater: Biological Reductive Dechlorination coupled with adsorption on biochar and supported by alternative materials from organic wastes

 Micaela Abruzzese, Laura Lorini, Marco Petrangeli Papini (Sapienza University of Rome),
 Bruna Matturro (IRSA-CNR)
- 17:35 Spider chart for chlorinated solvents remediation performance assessment

 Antonio Molinari, Luca Sacilotto, Mauro Fortugno, Roberta Sauro Graziano (Ramboll)
- **17:50** Mass of chlorobenzenes removed in in situ thermal remediation *Isabela Lima, Edson Arakaki, Jonas Oliveira, Aline Setti (Worley)*
- 18:05 Sustainable Remediation of Chlorinated Solvent Plumes: A Hydrogeophysical-Chemical Approach
 Giulia Felli, Paolo Ciampi, Carlo Esposito, Marco Petrangeli Papini (Sapienza University of Rome), Christian Nielsen, Laura Ledda (TAUW)
- **18:20** Assessing the Genetic Potential for Long-term Bioremediation in East Palestine, Ohio Dora Taggart, Sam Rosolina (Microbial Insights), Frank Loeffler, Gao Chen (University of Tennessee)
- **18:35** Panel discussion moderated by chairs
- 19:00 End of the session

Register yourself in the Google form https://forms.gle/oeogN4KvyPDBUoyZ9











SESSION 32 Wastewater and sewage sludge

THURSDAY 19 SEPTEMBER

17:00 – 19:00 CEST (Central European Summer Time)

Europe Room 2° floor

Opening

17:00 Welcome from Dietmar Müller-Grabherr (COMMON FORUM), Pavlos Tyrologou (EFG), Monica Crisan (IMPEL)

Presentations

- 17:05 Assessment of the Potential Application of Sewage Sludge and Compost Derived from Sewage Sludge as Organic Soil Amendments

 Marijana Kragulj Isakovski, Jelena Beljin, Nina Đukanović, Marko Šolić, Tamara Apostolović, Srđan Rončević, Snežana Maletić (University of Novi Sad)
- 17:20 Identification of soils exceeding heavy metal concentrations in Europe by using the limit values from Sewage Sludge Directive

 Felipe Yunta, Diana Vieira, Elise Van Eynde, Calogero Schillaci, Panos Panagos, Arwyn Jones, Piotr Wojda (JRC European Commission)
- 17:35 Optimizing Waste Water Treatment: A Numerical Case Study on Innovative Bioreactor Design with integrated Knitted Fabrics

 A. Kneer, D. Kneer (TinniT Technologies), A. August, B. Nestler (Karlsruhe Institute of Technology), J. Sarsourd (Deutsche Institute fur Textil- und Faserforschung)
- 17:50 Modified natural zeolites: innovative solutions for the removal of hexavalent chromium from contaminated waters

 Francesco Panattoni, Marianna Tardani, Bruno de Azevedo, Cosimo Masini (Zeocel Italia by DND Biotech))
- 18:05 INTECH4WATER: contaminant removal using microalgae towards an integrated wastewater treatment approach

 M. Melis, C. Baldisserotto, T. Chenet, L. Ferroni (University of Ferrara), M. Blosi, A. Costa (National Research Council), B. Esposito, L. Sciubba, R. Guzzinati, S. Busi (ENEA), E. Carfagna (University of Bologna), S. Pancaldi (Terra&Acqua Tech Laboratory).
- 18:20 Enhancement of the properties of municipal sewage sludge for sustainable utilization Nataša Slijepčević, Dragana Tomašević Pilipović, Anita Leovac Maćerak, Nataša Duduković, Milena Bečelić-Tomin, Đurđa Kerkez (University of Novi Sad), Milomirka Obrenović (University of East Sarajevo)
- 18:35 Panel discussion moderated by chairs
- **19:00** End of the session

Register yourself in the Google form https://forms.gle/Pv8eiZP6r7UZxmm49









SESSION 33 Sediment Cap Chemical Isolation

THURSDAY 19 SEPTEMBER 20:00 – 22:00 CEST (Central European Summer Time)



Opening

20:00 Welcome from Interstate Technology Regulatory Council (ITRC) and Remtech Europe

Charles Reyes (ITRC Director), Claudio Sorrentino (DTSC, ITRC), Marco Falconi (ISPRA, Remtech Europe)

Presentations

20:10 Sediment Cap Chemical Isolation training

Wes Thomas, Oregon Department of Environmental Quality; Wardah Azhar,
Parsons; Bhawana Sharma, Jacobs; Deirdre Reidy, Anchor QEA; Danny Reible,
Texas Tech University; Todd Cridge, Haley & Aldrich; Tamara Sorell, Brown & Caldwell

21:50 Questions and Answers Claudio Sorrentino (DSTC, ITRC), Marco Falconi (ISPRA, Remtech Europe)

22:00 End of the training

Register yourself in the Google form https://forms.gle/72utRdxGZG1iJLDm7

BRIEF DESCRIPTION OF THE TRAINING

The <u>ITRC Sediment Cap Chemical Isolation Guidance</u> provides a framework for the design, construction, and long-term monitoring of the chemical isolation function of sediment caps. The framework consists of an iterative design process informed by site-specific data that balances achievement of chemical design criteria, physical design constraints, constructability and permitting requirements. In addition, the guidance summarizes key construction considerations and presents a recommended approach for monitoring and evaluating long-term chemical isolation performance. The Sediment Cap Chemical Isolation Training will cover several key elements of the recommended framework, including:

- A capping overview that summarizes objectives of capping, role of the chemical isolation layer, and generic cap types and compositions.
- A discussion of performance objectives and design concepts that includes the selection of chemical isolation performance targets criteria and development of design criteria while considering the site setting and conceptual site model elements.
- An overview of chemical isolation layer modeling tools and discussion of their applicability to support chemical isolation design, important model input parameters, and the impact of uncertainty and sensitivity of modeling results.
- A summary of chemical isolation construction considerations, including an overview of available construction methods and tolerances and quality assurance and quality control measures.
- A discussion of cap performance monitoring and maintenance objectives and approaches that include developing monitoring objectives to assess chemical isolation performance and methods for guiding long-term maintenance decisions.





The management of contaminated sites in Africa: Challenges and Solutions

FRIDAY 20 SEPTEMBER 09:00 – 11:00 CEST (Central European Summer Time)



Opening

09:00 Welcome, introduction to the panel members, Chair: *Dr Heidi Snyman (Network of Industrially Contaminated Land in Africa)* Co-Chair: *Dr Inga Jacobs-Mata (IWMI/CGIAR Director: Water, Growth and Inclusion)*

Presentations

- **09:10** Keynote Context: A helicopter view of water and soil quality challenges on the African Continent
 - Dr Inga Jacobs-Mata (IWMI/CGIAR Director: Water, Growth and Inclusion)
- 09:30 A regulator's perspective on the challenges and management of contaminated land in Southern Africa – A viewpoint from South Africa Dr Mpho Tshitangoni (Department of Forestry, Fisheries and Environment; South Africa)
- **09:45** A service provider's perspective on the challenges and management of contaminated land in East Africa *Ms Lucy Thomas, RSK Group; Dar es Salaam, Tanzania*
- 10:00 The role of directed research and development in advancing the management of contaminated sites in West Africa
 Dr Ebenezer Ashun; University of Mines and Technology, Ghana
- 10:15 The benefits and challenges of using 1st world country standards for the investigation and management of contaminated sites in Africa, using Nigeria as a case study Dr Patricia Uchenna-Okeke, University of Benin Benin City, Edo State, Nigeria
- **10:30** Panel discussion facilitated by *Dr Heidi Snyman (Network of Industrially Contaminated Land in Africa)* and *Dr Inga Jacobs-Mata (IWMI/CGIAR Director: Water, Growth and Inclusion)*
- 10:50 Panel discussion moderated by chairs
- 11:00 End of the session

Register yourself in the Google form https://forms.gle/9qscrJ7rdNMUG1qZA





SESSION 35 BAT in the wastewater treatment

Europe Room
2° floor

FRIDAY 20 SEPTEMBER
09:00 – 11:00 CEST (Central European Summer Time)

Opening

09:00 Welcome from the chairs *Monica Crisan (National Environment Guard, Romania)* and *Genève Farabegoli (ISPRA, Italy)* - IMPEL ET Water & Land Leader and Deputy

Presentations

- **09:10** The Role of Soil Health in Sustainable Wastewater and Water Reuse Practices Nazaré Couto (CENSE, NOVA School of Science and Technology, Portugal)
- **09:30** Best Available Technologies in water reuse ensure management of health and environmental risks

 *Roberta Maffettone (Joint Research Center European Commission)
- **09:50** Questions and answers

 Monica Crisan (National Environment Guard, Romania) and Genève Farabegoli (ISPRA, Italy)
- **10:00** Best Available Technologies to remove micropollutants from urban wastewater *Nathan Obermaier (German Environment Agency)*
- **10:20** Best Available Technologies approach for wastewater epidemiological surveillance to protect human health Ana Allende (CEBAS-CSIC, Spain)
- 10:40 Questions and answers

 Monica Crisan (National Environment Guard, Romania) and Genève Farabegoli (ISPRA, Italy)
- 10:50 Wrap-up
- 11:00 End of the session

Register yourself in the Google form https://forms.gle/DxwpqUpqM83hbtEx9



Innovative PFAS soil remediation

FRIDAY 20 SEPTEMBER

09:00 – 11:10 CEST (Central European Summer Time)



Opening

- **09:00** Welcome from Jörg Frauenstein (Umweltbundesamt), Johan Ceenaeme (OVAM), Edith Martinez-Guerra (US Army Corps of Engineers)
- **09:05** Presentation of other conferences on contaminated sites: dates, location, topics, deadlines, call for abstracts ALGA (Matthew Potter), Nicola Africa (Heidi Snyman), Aquaconsoil (Frederic Coulon) and others, coordination of *Marco Falconi (ISPRA)*

Presentations

- 09:20 Microbial defluorination of TFA, PFOA, and HFPO-DA by a native microbial consortium under anoxic conditions Zhiwen Tang, Qing Wang, Changlong Wei, Mukhtiar Ali, Xin Song (Chinese Academy of Sciences), Timothy M. Vogel (Université Claude Bernard Lyon 1)
- **09:35** PFAS source zone stabilization: a zero-waste solution to a global problem *Marcello Carboni, Gareth Leonard (Regenesis)*
- **09:50** A holistic nature based solution for PFAS pollution in soil and groundwater Luca Fagiuoli, Luc de Ren (SGS), Erik De Bruyn (C-Biotech)
- 10:05 Enhanced PFAS Mass Removal From Soil and Groundwater Via Novel Surfactant Flushing Column Study

 George A. Ivey (Ivey International), David Holmes (Geosyntec), Cecilia Macleod, Reshmi Prakash (University of Greenwich)
- 10:20 PFAS Soil Treatment Processes A Review of Operating Ranges and Constraints (Concawe Report No.8/24)

 Jake Hurst, Sara Hale Jonathan Miles, Emilie Dal, Wouter Gevaerts, Jeffrey Burdick (Arcadis), Eleni Vaiopoulou, Markus Hjort (Concawe)
- **10:35** PFAS-contaminated soils and the possibilities for washing *Martin Bunzel (Schauenburg MAB)*
- **10:50** Panel discussion moderated by chairs
- 11:10 End of the session

Register yourself in the Google form https://forms.gle/xe5Wt3iiqmfXDx6F8













Risk assessment and F&T models

FRIDAY 20 SEPTEMBER

11:30 – 13:45 CEST (Central European Summer Time)

Europe Room
2° floor

Opening

11:30 Welcome from Antonella Vecchio (ISPRA), Laurent Thannberger (RNEST), Piotr Wojda (JRC-EC)

Presentations

- 11:35 Environmental Modelling and Simulation for Decision-Making in Health Risk Mitigation: A Case Study on Dengue Ferdinando Spagnolo (Centro Alti Studi della Difesa), Alberto Autore, Florigio Lista (Istituto di Scienze Biomediche della Difesa) Claudia Curcio (Università di Torino)
- 11:50 Microplastics as Vectors for Metals in Polluted Soils: Interactions Within Complex Mixtures of Pollutants

 Diego Baragaño, E. Rodríguez, M.A. López-Antón (Instituto de Ciencia y Tecnología del Carbono), S. Alcorta (Czech University of Life Sciences, CZU), E. Berrezueta (Instituto Geológico y Minero de España)
- 12:05 Large scale risk assessment methodologies for potentially contaminated sites and diffuse contamination

 Giulia Minolfi (Ca' Foscari University Venice), Elisa Giubilato, Alex Zabeo, Lisa Pizzol (GreenDecision)
- **12:20** We Can't Stop Breathing Why Assessing Vapor Intrusion is so Important Laurie Chilcote, Craig A. Cox (Cox-Colvin & Associates)
- 12:35 Development of a QGIS toolbox for the assessment of emissions of volatile organic compounds (VOCS) from the subsoil

 Marco Pitardi, Sofia Costanzini, Sergio Teggi (University of Modena e Reggio Emilia), Nicolò Tonolo, Alessandra Cecconi, Iason Verginelli (University 'Tor Vergata'), Simona Berardi (INAIL)
- 12:50 Simulation of the release and dispersion of hazardous substances following an industrial accident

 Deborah Panepinto, Marco Ravina, Marta Brignone, Federico Urbinati, Mariachiara Zanetti (Politecnico di Torino)
- 13:05 Evaluation of Passive Sampling Methods for Monitoring Volatile Organic Compounds in Soil Gas at Contaminated Sites

 Raffaella Borrelli, Alessandro Oldani (ENI), Alessandra Cecconi, Iason Verginelli, Renato Baciocchi (Univ. Tor Vergata), Federico Fuin (ARPAV), Renata Emiliani, Fabrizio Cacciari (ARPAE), Antonella Vecchio (ISPRA), Camilla Lanari, Federico Villani, Guido Bonfedi (ENI Rewind), Donatella Giacopetti (UNEM)
- **13:20** Panel discussion moderated by chairs
- 13:45 End of the session

Register yourself in the Google form https://forms.gle/TdBFaND3DVzr2HSSA







Test and full scale in-situ soil remediation

FRIDAY 20 SEPTEMBER

11:30 – 13:45 CEST (Central European Summer Time)



Opening

11:30 Welcome from Dietmar Müller-Grabherr (COMMON FORUM), Pavlos Tyrologou (EFG), Erika von Zuben (AESAS)

Presentations

- 11:35 Surfactant foam injection for enhanced in-situ remediation of hydrocarbon polluted soil

 Adil Baigadilov, Stéfan Colombano, Maxime Cochennec, Dorian Davarzani, Fabien Lion
 (BRGM), Laurent Oxarango, Hugues Bodiguel (Univ. Grenoble Alpes), Sagyn Omirbekov
 (Nazarbayev University, Kazakhstan)
- **11:50** Pilot test of injection: design and mistakes

 Jeroen Vandenbruwane, Lionel Counet, Bram Vandekerhove (Injectis)
- **12:05** Soil washing case studies within the remediation sector *Andrew Wilson, Amy Conway, Michael Nesbitt (CDE Group)*
- 12:20 High Chain Hydrocarbon Soil Remediation with Advanced Oxidation T.E.S.T Technology Case Study

 Jamie Davidson, Remy Kalai (Amerapex)
- **12:35** Fungal-assisted bioremediation for the treatment of TPH contaminated soil a case study *Ilaria Chicca, Maxime Dessily, Caroline Zaoui (Novobiom), Johan Deroover (Sarpi Veolia)*
- **12:50** Modeling Study of Vapor Recovery Flow Requirements for High-Temperature Thermal Remediation

 David A. Rountree (McMillan-McGee)
- **13:05** Enhancing Sustainability: Solar Energy Management via Soil Storage for Zero-Carbon Solutions Jan Haemers, Hatem Saadaoui, Aline Jordens, Aurelien Vandekerckhove (Haemers Technologies)
- **13:20** Panel discussion moderated by chairs
- 13:45 End of the session

Register yourself in the Google form https://forms.gle/bExyjoxtVoTcRN6b7















Advances in Ecotoxicology and Ecosystem evaluation

FRIDAY 20 SEPTEMBER 14:30 – 16:30 CEST (Central European Summer Time)

Europe Room
2° floor

Opening

14:30 Welcome from Felipe Yunta (JRC-EC), Pavlos Tyrologou (EFG)

Presentations

- 14:35 Bioplastic-degrading microbiome associated to the marine zooplankton: case study of the degradation of a polyester bioplastic

 Luca Niccolini, Maurizia Seggiani, Giovanna Strangis, Niccoletta Barbani, Giulio Petroni, Simona Di Gregorio (University of Pisa), Valentina Vitiello, Isabella Buttino (ISPRA), Xiaojun Yan (Zhejiang Ocean University)
- 14:50 Assessment of pesticides residues in European agricultural soils

 Diana Vieira, Antonio Franco, Felipe Yunta, Arwyn Jones, Piotr Wojda (JRC European
 Commission)
- **15:05** Microplastics associated with shoreline marine organisms at the Eastern Cape in South Africa Cornel-Mari van der Merwe, Carlos Bezuidenhout, Hindrik Bouwman, Rialet Pieters (North-West University, South Africa)
- 15:20 Combined reprotoxic effects of polystyrene microplastics and bisphenol A in the sea urchin Paracentrotus lividus

 Rosaria Notariale, Lisa Locatello (Stazione Zoologica Anton Dohrn), Raffaele Boni (University of Basilicata) Patrizia Bovolin (University of Turin), Alessandra Gallo
- 15:35 Pre-Remediation Characterization of petroleum Fractions and Ecotoxicity at the Heating Plant Site

 Mila Ilic, Jelena Avdalovic, Nenad Marić, Gordana Devic, Jelena Milic (University of Belgrade)
- 15:50 Panel discussion moderated by chairs
- **16:30** End of the session

Register yourself in the Google form https://forms.gle/K5sZUYpFeQZhgsEs9





SESSION 40 AFFF and PFAS impacted sites

White Room

FRIDAY 20 SEPTEMBER

14:30 – 16:45 CEST (Central European Summer Time)

Opening

14:30 Welcome from Johan Ceenaeme (OVAM)

Presentations

- **14:35** AFFF Fire Suppression Systems Equipment PFAS Decontamination Via Heated Pressurized Surfactant Flushing Decontamination

 George A. Ivey (Ivey International), Scott Poynor (Geologic Science and Technology)
- **14:50** PFAS removal by activated carbon: adsorption and thermal reactivation *Rachel Houssiere, Francesco Crescenti, Timothy Mosselmans, Mauro Magi (Chemviron)*
- 15:05 PFAS Source Differentiation at Airports

 Janet Anderson (GSI Environmental), Dan Schneider, Mat Knutson (Terracon), Zachary Puchacz
 (Mead & Hunt)
- 15:20 Application of biosorption technology for PFAS removal in water

 Marta Senofonte, Giulia Simonetti, Stefano Parisi, Marco Petrangeli Papini (Sapienza
 University of Rome), Carmela Riccardi (National Institute for Insurance against Accidents at
 Work (INAIL))
- **15:35** Bench Scale Trial to Evaluate removal efficiencies for short and long chain PFAS using Surface Active Foam Fractionation in combination with additives Helena Hinrichsen, Robin Axelson (Envytech Solutions)
- **15:50** Technology Selection under U.S. EPA Guidance on the Destruction and Disposal of PFAS *Cindy Frinkle (USEPA)*
- **16:05** Panel discussion moderated by chairs
- **16:30** End of the session

Register yourself in the Google form https://forms.gle/qcAxr5hDrBfxtPzQ9















SESSION 41 Vapour intrusion



FRIDAY 20 SEPTEMBER

14:30 – 16:30 CEST (Central European Summer Time)

Opening

14:30 Welcome to the session *Marco Falconi (ISPRA, Remtech Europe)*

14:35 Introduction from the chairs

Patricia Ruiz (Soldi Ambiental, AESAS), Thiago L. Gomes (Doxor, AESAS)

Presentations

14:40 Vapour intrusion Rafael Sato (AESAS)

16:15 Panel discussion moderated by chairs

16:30 End of the session

Register yourself in the Google form https://forms.gle/bK2ik2hkCpVDWFYm8



Rafael Sato - AESAS

DESCRIPTION OF THE TRAINING

The vapor intrusion course will cover basic concepts as well as topics such as sampling, analysis, and risk assessment of inhalation due to environmental contamination. Additionally, it will present how the topic is addressed in Brazil compared to the reality in the USA.



Climate change and environmental challenges

FRIDAY 20 SEPTEMBER

16:45 – 19:20 CEST (Central European Summer Time)

White Room
1º floor

Opening

16:45 Welcome from *Pavlos Tyrologou (EFG)*

Presentations

- **16:50** Enhancing Sustainable Growth through Energy Management in the Municipality of Quezon, Bukidnon, Philippines
 - John Michael Villardo (Pollution Control Association of the Philippine)
- 17:05 High concentration of odor waste gas was important for the maintenance of a deodorant microbial community of Biological trickling deodorant tower

 QiuLi Wang (Aquatic Technology Center, China)
- **17:20** Harmony and Hazard on the Plate: Unraveling Endocrine Disruptors in Global Diets *Prachi Gupta (Independent researcher)*
- 17:35 Direct spectrofluorimetric method for analysis of phenothrin and permethrin insecticides in Senegalese surface and groundwater

 Thiaré Diène Diégane, Astou Ndiaye, Atanasse Coly (Université Cheikh Anta Diop, Sénégal) Philippe
 Giamarchi (Université de Bretagne Occidentale (UBO))
- **17:50** A Global Assessment of Climate Change Education and Education For Sustainable Development Hacer Aksungur Zengin, Emine Didem Evci Kiraz, Belgin Yıldırım (Adnan Menderes University)
- **18:05** Study and optimization of continuous regeneration of the catalyst CR-401 for catalytic reforming *Ould Brahim Insaf, Merdas Mohamed El Amine, Belkhen Islem (USTHB)*
- 18:20 Microalgae biorefinery for a greener economy
 Pierluigi Giacò, Costanza Baldisserotto, Natasha Damiana Spadafora (University of Ferrara), Luisa Pasti
 Simonetta Pancaldi (Terra&Acqua Tech Laboratory), Sara Amadori, Ilaria Zanoni, Magda Blosi (National Research Council)
- **18:35** Circular economy: challenging lessons *Daniela Lud (Rhein-Waal University)*
- 18:50 SMART4ENV Project: Enhancing the Scientific Capacity of TUBITAK MAM in the Field of Smart Environmental Technologies For Climate Change Challenges

 Selda Hocaoglu, Burcu Kıran, Sebnem Aynur (TUBITAK Marmara Research Center), Francesco Fatone (Marche Politechnical University), Salas, S.P. (Fundacio Universitaria Balmes), Maletsky, Z. (Norges Mıljo-Og Biovitenskaplige Universitet), Piccinetti, L (Sustainable Innovation Technology Services)
- **19:05** Panel discussion moderated by chairs
- **19:20** End of the session

Register yourself in the Google form https://forms.gle/iyxZob2YHCUvDLYU6





SESSION 43 LA FRESQUE DU SOL

Europe Room
2° floor

FRIDAY 20 SEPTEMBER

16:30 – 19:00 CEST (Central European Summer Time)

An interactive workshop to discover the soil's complexity and propose actions

For the first time in Italy and in an international congress, you're invited to participate in the up-to-date French interactive tool to promote soil's knowledge. 8 "players" around a table and a virgin sheet of paper will built their vision of soil's properties, functions, environmental services, etc. A supervisor will rule the sequence and manage time slots.

Discover the project

- A serious game
- Simple, reflecting the complexity of the soil with a systemic vision
- To raise awareness of the issues at stake
- To make participants want to act
- Scientific rigor: based on the contribution from a group of 38 experts in soil sciences





36 Scientific summaries

https://fresquedusol.com/



Register yourself in the Google form https://forms.gle/Jhzz1154uRHj8Emg7





SESSION 44 Bioremediation Techniques Used in Brazil

FRIDAY 20 SEPTEMBER 16:30 – 18:30 CEST (Central European Summer Time)



Opening

16:30 Welcome to the session *Marco Falconi (ISPRA, Remtech Europe)*

16:35 Introduction from the chairs Patricia Ruiz (Soldi Ambiental, AESAS), Thiago L. Gomes (Doxor, AESAS)

Presentations

16:40 Bioremediation Techniques Used in Brazil *Raoni Azevedo (AESAS)*

18:15 Panel discussion moderated by chairs

18:30 End of the session

Register yourself in the Google form https://forms.gle/QrpC6sJ3DE3mu3R39



Raoni Azevedo Zeitune -AESAS

DESCRIPTION OF THE TRAINING

The course will cover some characteristics of the Brazilian underground environment, the basic concepts of biostimulation techniques, and the main preliminary tests necessary for the design of a full-scale bioremediation project. Additionally, the training will provide some cases of bioremediation projects in Brazil along with the main challenges faced.

SUSTAINATHON



Sustainability the road to global value

24-25 SEPTEMBER 2024

From 14:00 (24 September) to 14:00 (25 September) CEST – 24 HOURS

7 REASONS TO ATTEND



RELISH the progress being made towards one, more or all of the 17 UN SDGs by different countries.

ENJOY the variety of approaches and methods being used to deliver and monitor progress on individual targets for specific SDGs.

MANAGE your participation to fit with other commitments over the 24 hours – attend as little or as much of Sustainathon as you want.

TAKE AWAY inspiration and ideas that you can apply in your country, on your projects for your stakeholders.

EXPERIENCE the presentations at a time that suits you – whether you attend live or follow the recorded presentations when it is more convenient for your time zone.

CHAT online with other like-minded practitioners from around the world – during and after the event.

HONOUR those sharing their hard won experience – even if we cannot give them a warm round of applause

To reserve your seat and for the Certificate, register here

Sustainathon Secretariat: Clementine Py – sustainathon2024@gmail.com

Registration form: https://forms.gle/tVtr3Y9ekpQ3y3Fu9

Some of the confirmed speakers

Abe Sharman (AUS)	Reinhold Mangundu (NB)	Koffi Valentin Mawougnigan (TG)	Sher Shah Khan (PK)
Randy H. Adams (MX)	Daisuke Yamasaki (JP)	Hao-Chun Hung Hung (TW)	Sarah Whiteley (AUS)
Amaru Aragon (PE)	Ange Dorine Irakoze (BI)	Balmeo Marylin (PH)	Juan Ignacio Tuccillo (AR)
Oo cheng Keat (MY)	Terry Long (CA)	Gopal Mahadev (OM)	Verónica Isidra Domínguez Rodríguez (MX)
Dyana Sari (ID)	Venerando Gambuzza (IT)	Nina Koele (NZ)	Diana Gutierrez
Kwasi Samuel Benefto (GH)	Lucila Martelli (AR)	Thomas Jacob (IN)	Suna Julia Park (UZ)
Soinato Leboo (KE)	Margot De Cleen (NL)	Scott Warner (US)	Elena Stefanoni (UN) UN (P) Entire international (UN)
Gareth Hughes (NZ)	SUSTAINATHON Sustainability the road to global value	SUSTAINATHON Sustainability the road to global value	SUSTAINATHON Sustainability the road to global value



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Antonio Callaba de Roa Environmental Ministry - Foro de las Comunidades Autónomas

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Johan Ceenaeme OVAM, Belgium

Said El Fadili Brussels Capital Region and Irisnet, Brussels
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Stefanie Fiorenza ASTM International, USA
Jörg Frauenstein UmweltBundesAmt, Germany

Wouter Gevaerts NICOLE - Network of Industrial Contaminated Land in Europe

Josè Carlos Gouvea NICOLE Latin America

Paola Grenni National Research Council (CNR), Italy

Nicola Harries CL:AIRE - Contaminated Land: Applications in Real

Environments, United Kingdom

Deyi Hou Tsinghua University, Beijing, China

Róbert Jelínek Slovak State Geological Institute of Dionyz Stur, Slovakia

Edith Martinez-Guerra US Army Corps of Engineers (USACE), USA

Kine Martinsen Ministry of Environment, Norway

Dietmar Müller-Grabherr Common Forum and European Topic Centre on Urban, Land Use

and Soil, Austria

Paul Nathanail CABERNET, UK

Vicki Pearce Australasian Land and Groundwater Association, Australia

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Claudio Sorrentino California Department of Toxic Substances Control, ITRC
Frank Swartjes National Institute for Public Health and the Environment, The

Netherlands

Nino Tarantino Illegal Landfills Extraordinary Commissioner Office, Italy
Laurent Thannberger Réseau National d'Expertise Scientifique et Technique sur les

sols (RNEST), France

Pavlos Tyrologou EFG European Federation of Geologists, Brussels-Belgium

Antonella Vecchio ISPRA, Italy

Erika von Zuben Associação Brasileira das Empresasde Consultoria e Engenharia

Ambiental, Brasil

Piotr Wojda JRC - European Commission



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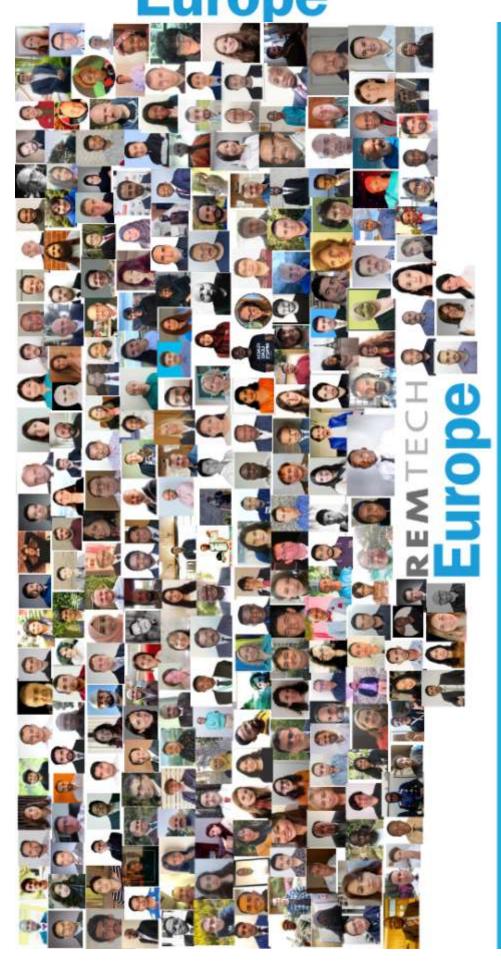
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Clementine Py ALGA



Ambassadors

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