



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 | Mon 16 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 | Réseau National d'Expertise Scientifique et Technique sur les sols Session francophone: comment évaluer la santé des sols? 3 | 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 Stakeholder Engal 15:30 Drone Technolog Assessment 16:30 Toxicity Testing w 17:30 A Combination of on Storage Tanks 18:30 Assessment of NA Sediments with a Flux C 20:00 PFAS in Consume | y for Site 7 with the Mayfly Three Standards 9 APL Ebullition in Chamber | 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 | Wed 18 Sept EUROPE ROOM – 2°floor | Thu 19 Sept BLUE ROOM – 1°floor | Thu 19 Sept |
|--|---|---|--|---|
| 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 LIFE MY SOIL | Groundwater remediation |
| 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 DEIVE | 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 17 | 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 * INTERSTATE * THE CHINOLOGY * ANOLYTICE STATE * THE CHINOLOGY * ANOLYTICE ST | Chlorinated solvents remediation 31 |

| TIME ZONES | | IES | Thu 19 Sept | Fri 20 Sept | Fri 20 Sept | Fri 20 Sept |
|------------|------|-------------|------------------------|--|-----------------------------|-------------------------------------|
| | | | EUROPE ROOM – 2°floor | ONLINE | WHITE ROOM- 1°floor | EUROPE ROOM – 2°floor |
| | CEST | 09:00-11:00 | Heavy metals and | NICOLA 34 | Innovative PFAS soil | * * * |
| *;: | CST | 15:00-17:00 | POPs | NICOLA Network for Industrially Contaminated Land in Africa | remediation | * IMPEL * |
| | _ | 12:30-14:30 | | The management | | BAT in **** |
| 88888 | 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) |
| | CEST | 11:30-13:30 | Mining and Soil | From 14:00 (24 Sept) to | Test and full scale in-situ | Risk assessment and |
| *; | CST | 17:30-19:30 | Remediation | 14:00 (25 Sept) CEST 24h SUSTAINATHON | soil remediation | F&T models |
| • | IST | 15:00-17:00 | Innovations | The state of the s | | |
| | EDT | 05:30-07:30 | | 45 | | |
| | | 06:30-08:30 | (26) | Sustainability the road to global value | (38) | (37) |
| | CEST | 14:30-16:30 | Oil and petroleum | _ | AFFF and PFAS impacted | Advances in |
| *; | CST | 20:30-22:30 | hydrocarbons | 41 AESAS | sites | Ecotoxicology and |
| © | IST | 18:00-20:00 | (29) | Tennishing Engalant Statement | | Ecosystem evaluation |
| | EDT | 08:30-10:30 | | Vapor intrusion | 40 | (39) |
| | BRT | 09:30-11:30 | | | (40) | |
| | CEST | 17:00-19:00 | Wastewater and | \wedge | Climate change and | LA FRESQUE 43 |
| *: | | 23:00-01:00 | sewage sludge | Bioreme diation AESAS | environmental challenges | DU SOL 43 |
| ® | IST | 20:30-22:30 | (32) | Techniq | 42) | An interactive workshop to discover |
| 20000000 | | 11:00-13:00 | | ues Used 44 | 72 | the soil's complexity |
| | | 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.





HOW TO PARTICIPATE IN PRESENCE?

E-mail *

For who is joining us physically us in Ferrara (Italy), you have to register here not later than 12 September 2024 https://ticket.remtechexpo.com. Don't wait till the last week. You will then have to print your tickets (minimum quality 300 dpi) 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. If you come by car, the parking has a cost of 7€/day. Exhibitors and sponsors would park for free.

| remtecheurope@gmail.com | _ |
|---|---|
| Soggetto partecipante / Attendee * | |
| Persona fisica / Private | |
| Nome / Name * | Cognome / Surname * |
| Nome / Name campo obbligatorio / mandatory field | Cognome / Surname campo obbligatorio / mandatory field |
| Nazionalità / Nationality * | Regione / Region * obbligatori solo in caso di nazionalità ITALIA / mandatory only in case of nationality ITALY |
| NESSUNA OPZIONE + | SCEGLI UNA REGIONE |
| Nazionalità / Nationality campo obbligatorio / mandatory field | Regione / Region campo obbligatorio / mandatory field |
| Provincia / Province * obbligatori solo in caso di nazionalità ITALIA / mandatory only in case of nationality ITALY | Città / City * obbligatori solo in caso di nazionalità ITALIA / mandatory only in case o nationality ITALY |
| SCEGLI UNA PROVINCIA | SCEGLI UN COMUNE + |

Credit for the cover image: MANEL FERNANEZ - LAMOR CORPORATION



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 | STANDARD | info@annunziata.it |
| | | | € 220,00 | SUPERIOR | +39 0532 201111 |
| | | | € 170,00 | DEPENDANCE | WhatsApp +39 39250 26757 |
| B&B NETTUNO | | € 69,00 | € 74,00 | COLAZIONE | ferrara@hotelbb.com |
| | | | | ESCLUSA | +39 0532 977155 |
| HOTEL CARLTON | Sconto 10 | nto 10%, indicare codice "RemTech" sul | | nTech" sul | info@hotelcarlton.net |
| | | to <u>www.hot</u> | | _ | +39 0532 211130 |
| HOTEL IL DUCA | € 79,00 | € 79,00 | € 99,00 | € 129,00 | info@ilducadeste.it |
| D'ESTE | | 6.400.00 | 6 4 2 2 2 2 2 | | +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 |
| HOTEL WAZIONALE | € 123,00 | € 133,00 | € 140,00 | | +39 0532 243596 |
| HOTEL OROLOGIO | | € 200,00 | € 250,00 | | info@hotelorologio.com |
| | | , | 0 -00,00 | | +39 0532 769576 |
| RADISSON HOTEL | | € 125,00 | € 140,00 | PREMIUM | info.ferrara@radisson.com |
| | | € 135,00 | €. 150,00 | SUPERIOR | +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 |
| - | 11.15 | 11.30 |
| - | 11.45 | 12.00 |
| - | 12.15 | 12.30 |
| - | 12.45 | 13.00 |
| - | 13.15 | 13.30 |
| - | 13.45 | 14.00 |
| - | 14.15 | 14.30 |
| - | 14.45 | 15.00 |
| - | 15.15 | 15.30 |
| - | 15.45 | 16.00 |
| - | 16.15 | 16.30 |
| - | 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

n.11 from FS" Bus the Train Station "Stazione (https://goo.gl/maps/W3cvZhctmL6CCgfT8) or from the Estense "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

RELAX IN THE BEACHES IN "LIDI FERRARESI"

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"

- o Introduction Piotr Wojda (JRC, EC)
- o ARAGORN (Xenia) 15 min
- Mission Soil Pollution Cluster: workshop summary (Edaphos) 20min
- 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 Ecological Risk Assessment – Part 1

Speaker to be confirmed (USACE)

16:25 Panel discussion

Edith Martinez-Guerra (USACE)

16:35 Coffee break

16:50 Ecological Risk Assessment – Part 2

Speaker to be confirmed (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





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 Projet PRODIJ: Développement d'indicateurs de biodiversité pour les sols agricoles sur la communauté urbaine de DIJON Jérôme CORTET (Université Montpellier 3)
- 10:30 D iagnostiquer 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





SESSION 6 Stakeholder Engagement

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



Opening

14:30 Welcome from ASTM International and Remtech Europe

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

Presentations

- **14:35** Stakeholder Engagement Paul Sonnerfeld (ASTM International)
- **15:20** Questions and Answers Stephanie Fiorenza (ASTM International) Marco Falconi (ISPRA, Remtech Europe)
- 15:30 End of the training

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



Paul Sonnerfeld





SESSION 7 Drone Technology for Site Assessment

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** Drone Technology for Site Assessment Jim Bartlett (Bureau Veritas, ASTM International), Mike Sowinski (Terradex, ASTM International)
- 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/CUycbSZWZLnCMy6N9



Jim Bartlett



Mike Sowinski





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 Cam Irvine (Robertson-Bryan, 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



Cam Irvine





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

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



Opening

18:30 Welcome from ASTM International and Remtech Europe

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

Presentations

18:35 Assessment of NAPL Ebullition in Sediments with a Flux Chamber Tripp Fischer (Brownfield Science & Technology, **ASTM** International)

19:20 Questions and Answers Stephanie Fiorenza (ASTM International) Marco Falconi (ISPRA, Remtech Europe)

19:30 End of the training



Tripp Fisher

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





SESSION 11 PFAS in Consumer Products

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 PFAS in Consumer Products

Rock Vitale (Montrose Environmental Group, ASTM International)

21:50 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





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



SESSION 13 PFAS risk assessment and management

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

White Room 1° floor

Opening

09:00 Welcome from Marco Falconi (ISPRA) and introduction from the Chairs

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 Addressing Key Uncertainties in Risk Assessment through the Latest Sampling and Analytical Methods for Sites Impacted by PFAS Contamination

 Geraint Williams, Manuela Borgonovo, Laura Castelletti Brunelli, Matteo Pagnucco, Zdenek

 Jirak (ALS Laboratories)
- **10:20** Properly assessing PFAS risk: the SGS PFASafe®2.0 approach *Luca Fagiuoli, Pieter Joos, Luc de Renn (SGS Group)*
- **10:35** Panel discussion moderated by chairs
- 11:00 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 *Marco Falconi (ISPRA)* and introduction from the Chairs

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 – 13:30 CEST (Central European Summer Time)



Opening

11:30 Welcome from *Marco Falconi (ISPRA)* and introduction from the Chairs

Presentations

- 11:35 Real-fime groundwater sensor networks for sustainable land and water use in changing condifions
 - 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
- 13:30 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 *Marco Falconi (ISPRA)* and introduction from the Chairs **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 *Joerg Frauenstein (Umweltbundesamt (Germany))*
- **12:05** The EU soil directive: a reflection from Italy Francesca Assennato (ISPRA, Italy) to be confirmed
- **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 Netherlands Frank Swartjes (RIVM, The Netherlands) to be confirmed
- **12:50** The EU soil directive: a reflection from Finland *Jussi Reinikainen (SYKE, Finland) to be confirmed*
- 13:05 Panel discussion moderated by chairs
- 13:45 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 *Marco Falconi (ISPRA)* and introduction from the Chairs

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** Not All Is As It Seems Reinvestigating A Persistent Benzene Plume Using HRSC *Graeme Miller, Emma Walsh (Senversa)*
- **15:35** Three-dimensional contaminant modeling in thermal remediation for performance assessment

 Marcelo Silveira, Aline Setti, Edson Arakaki, Jonas Oliveira, Isabela Lima (Worley)
- **15:50** MIP-OMS experiences after one year of deployment: On-site mass spectrometry based high-resolution characterization technology with continuous monitoring of individual contaminant species

 Eugen Martac (Fugro), Claudio Carusi (Mares)
- **16:05** 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)

Opening

14:30 Welcome from Marco Falconi (ISPRA) and introduction from the Chairs

Presentations

- 14:35 The Characteristics of Soil Contamination in Industrial Complex in Korea

 Kwon-Chan Park, Hui-jin Kim, Yonh-Hoon Seol, Dong-Hyeon Kim, In-Ho Hwang, Un-jae You
 (Korea Environment Corporation)
- 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

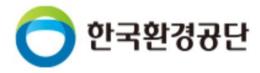
 Dietmar Müller-Grabherr, Gernot Döberl (Environment Agency Austria (EAA))
- **15:50** Understanding the synergies between Port Receiving Facilities and Contaminated Land Remediation

 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







Europe Room

2° floor

Danışmanlık & Mühendislik







In situ thermal remediation

WEDNESDAY 18 SEPTEMBER 17:00 – 19:00 CEST (Central European Summer Time) | White Room 1° floor

Opening

17:00 Welcome from Marco Falconi (ISPRA) and introduction from the Chairs

Presentations

- 17:05 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)
- 17:20 Thermal desorption of mercury: steps to full scale

 Matthieu Sangely, Laurent Thannberger (Valgo), Pierre-Louis Guillerm (Ramboll)
- 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)

Opening

17:00 Welcome from *Marco Falconi (ISPRA)* and introduction from the Chairs

Europe Room 2° floor

Presentations

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

 Martin Nicolas, Grybos Malgorzata, Le-Guet Thibaut, Dupuy Fabrice, Joussein Emmanuel
 (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 Session: part 2 (15 min talk + 5 min questions)

- 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)

The Project WHAT IS LIFE MySOIL?

Blue Room 1° floor

The LIFE MySOIL project develops a competitive and innovative technology to demonstrate the feasibility of mycoremediation to remediate all petroleum-derived organic pollutants from aged industrial contaminated soils.

WHICH IS THE CONTEXT?

Soil pollution constitutes one of the main threats to the health of soil ecosystems in Europe, in terms of complexity, toxicity and recalcitrance. There are about 2.8 million sites potentially contaminated, with 650,000 of them being identified as requiring remediation; among them, only 15% have been already treated [Status of local soil contamination in Europe: Revision of the indicator "Progress in the management Contaminated Sites in Europe" (No. JRC107508), 2018]. Recent estimates found that mineral oil and polycyclic aromatic hydrocarbons (PAHs), also commonly referred to as total petroleum hydrocarbons (TPHs), amount to an estimated mean value of 35% of all contaminants present in European soil. This percentage increase to 50% if BTEX compounds (benzene, toluene, ethylbenzene and xylene) and volatile organic compounds (VOC) are included.

PARTNERS

The consortium of the project is coordinated by <u>Eurecat</u>, and counts with the participation of 7 associated beneficiaries including the <u>Madrid Autonomous University</u> and the engineering <u>KEPLER</u> (Spain), <u>University of Tuscia</u> and the project management and engineering <u>Eni Rewind</u> (Italy), the engineering <u>VALGO</u> (France), the fungal provider company <u>Novobiom</u> (Belgium) and the environmental consultancy providing services on monitoring <u>Isodetect</u> (Germany).

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



SESSION 23 Groundwater remediation

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

Opening

09:00 Welcome from *Marco Falconi (ISPRA)* and introduction from the Chairs

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
2º floor

THURSDAY 19 SEPTEMBER

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

Opening

09:00 Welcome from *Marco Falconi (ISPRA)* and introduction from the Chairs

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** Panel discussion moderated by chairs
- 11:00 End of the session

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











SESSION 25 PFAS groundwater remediation

THURSDAY 19 SEPTEMBER

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

White Room
1° floor

Opening

11:30 Welcome from Marco Falconi (ISPRA) and introduction from the Chairs

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)
- 12:35 Sustainable Surfactant Enhanced Hydrocarbon, Chlorinated Solvent, and PFAS Remediation Resolving Hydro-Geo-Chemical Limitations

 George A. Ivey (Ivey International)
- **12:50** Panel discussion moderated by chairs
- 13:30 End of the session

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















SESSION 26 Mining and Soil Remediation Innovations

THURSDAY 19 SEPTEMBER

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

Europe Room 2° floor

Opening

11:30 Welcome from Marco Falconi (ISPRA) and introduction from the Chairs

Presentations

- **11:35** Converting iron ore tailings into soil like growth medium for ecological rehabilitation *Songlin Wu (Chinese Academy of Sciences), Longbin Huang (University of Queensland)*
- **11:50** 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)
- 12:05 Statistical Analysis, Bioaccessibility and Soil Amendment Addressing Soil Lead Contamination From Mining and Smelting Sources

 Graeme Miller, Jonathan Mann (Senversa)
- **12:20** Engineering contaminated soils for re-use *Tommy Shearer (Duraflex)*
- **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







Live Demo

THURSDAY 19 SEPTEMBER

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

In front of Pavilion 2

13:30 Meeting at the entrance of Pavilion 6 with the Chairs

Paola Grenni (CNR)), Laurent Thannberger (RNEST)

13:35 Program in progress

Several companies

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 Marco Falconi (ISPRA) and introduction from the Chairs

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 (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** Study of E-DNA and soil biodiversity through microbiome: from water reuse to food *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









SESSION 29 Oil and petroleum hydrocarbons

THURSDAY 19 SEPTEMBER

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

Europe Room 2° floor

Opening

14:30 Welcome from Marco Falconi (ISPRA) and introduction from the Chairs

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 Panel discussion moderated by chairs
- 16:30 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)

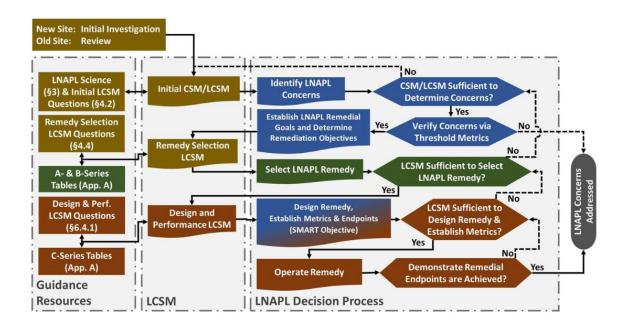
Presentations

- **17:10** Light Non-Aqueous Phase Liquid (LNAPL) site management: LCSM evolution, decision process and remedial technologies Speaker to be confirmed
- **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







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 Marco Falconi (ISPRA) and introduction from the Chairs

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 Univerisity 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 Marco Falconi (ISPRA) and introduction from the Chairs

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 *Speaker to be confirmed*

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

This training provides a framework for the design, construction, and long-term monitoring approach for the chemical isolation function of sediment caps. It is intended for regulators, stakeholders, consultants, responsible parties, and owners of contaminated sediment sites where sediment capping has been selected as a remedy. The ITRC guidance supports the use of 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 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



SESSION 36 Innovative PFAS soil remediation

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

White Room
1° floor

Opening

- 09:00 Welcome from Marco Falconi (ISPRA) and introduction from the Chairs
- **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** Panel discussion moderated by chairs
- 11:00 End of the session

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











SESSION 37 Risk assessment and F&T models

FRIDAY 20 SEPTEMBER 11:30 – 13:30 CEST (Central European Summer Time)

Europe Room 2° floor

Opening

11:30 Welcome from *Marco Falconi (ISPRA)* and introduction from the Chairs

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** Panel discussion moderated by chairs
- 13:30 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)

White Room

Opening

11:30 Welcome from Marco Falconi (ISPRA) and introduction from the Chairs

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 Marco Falconi (ISPRA) and introduction from the Chairs

Presentations

- 14:35 Combined reprotoxic effects of polystyrene microplastics and bisphenol A in the sea urchin Paracentrotus lividus

 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** A circular economy case history for a quarry restoration Sara Ceccon, Aldo Trezzi, Mara Moggia (Ramboll), Elisa Bizzotto (Fondazione Ca' Foscari)
- **15:20** 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)
- 15:35 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
- 15:50 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)
- **16:05** 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
1° floor

FRIDAY 20 SEPTEMBER

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

Opening

14:30 Welcome from Marco Falconi (ISPRA) and introduction from the Chairs

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 Innovative Foam Fractionation Technology For The Treatment Of Per- And Polyfluoroalkyl Substances (PFAS) In Contaminated Water Using Biodegradable Amendments

 Wassim Almouallem, Hugo Carronnier, Martin Marechal, Louise Delor (Spuma), Eric Branquet (Ecofield consulting)
- 15:35 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))
- **15:50** 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



Climate change and environmental challenges

FRIDAY 20 SEPTEMBER

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



Opening

16:45 Welcome from *Marco Falconi (ISPRA)* and introduction from the Chairs

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 (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/Jhzz1154uRHj8Emq7





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

SUSTAINATHON



Sustainability the road to global value

24-25 SEPTEMBER 2023

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

7 REASONS TO ATTEND



 ${f R}$ ELISH 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



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Diego Angotti Italian Ministry for Ecological Transition

Thomas Aspray Scottish Contaminated Land Forum, United Kingdom

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