

 **Advances in remediation technologies**
– Corinne Merly (BRGM, FR) 

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IRT14 **Emerging contaminants** in soil and groundwater – safeguarding drinking water, soil and freshwater ecosystem services

IRT15 Sustainable management to **restore** ecological and socio-economic **value** of degraded land

IRT16 Technologies and **eco-engineering of SSW** for sustainable use of agricultural, forest & urban land

IRT17 **Climate change challenges** - improving preparedness and response for climate conditions and related hazards

NC4 **Pollutant degradation**, filtering and immobilisation capacity

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IRT14 **Emerging contaminants** in soil and groundwater – safeguarding drinking water, soil and freshwater ecosystem services

What techniques, examples and BAT we already have to give solution in acting with emerging contaminants?

IRT15 Sustainable management to **restore** ecological and socio-economic **value** of degraded land

Define alternative technologies and practices for soil and water remediation and to minimize pollution, accounting the various sources of elements, and assessing the costs associated.

NC4 **Pollutant degradation**, filtering and immobilisation capacity

How taking into account natural resilience to promote new types of remediation technologies or improved the efficiency of existing ones?

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IRT16 Technologies and eco-engineering of SSW for sustainable use of agricultural, forest & urban land

How to optimize existing and innovative remediation technology for contaminated soil, groundwater, sediment (e.g. for big urban VOC-plumes, e.g. for low permeable geology, e.g. cleaning soil contaminated with multiple parameters)?

Which technologies may contribute to a better de-contamination and recycling of organic wastes and industrial residues?

IRT17 Climate change challenges - improving preparedness and response for climate conditions and related hazards

How to design technologies and planning tools for climate change adaptation of resource efficient wastewater systems for a sustainable built environment?



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3



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Topics rating

16 delegates participated: 8 in the first round table, 5 in the second one and 3 in the third one.

Topics	Interest
IRT14 Emerging contaminants in soil and groundwater – safeguarding drinking water, soil and freshwater ecosystem services	14/16
IRT15 Sustainable management to restore ecological and socio-economic value of degraded land	9/16
IRT 16 Innovative technologies & eco-engineering for on-site monitoring, soil quality & plant cover	7/16
IRT17 Climate change challenges - improving preparedness and response for climate conditions and related hazards	2/16
IRT17 NC4 Pollutant degradation , filtering and immobilisation capacity	7/16



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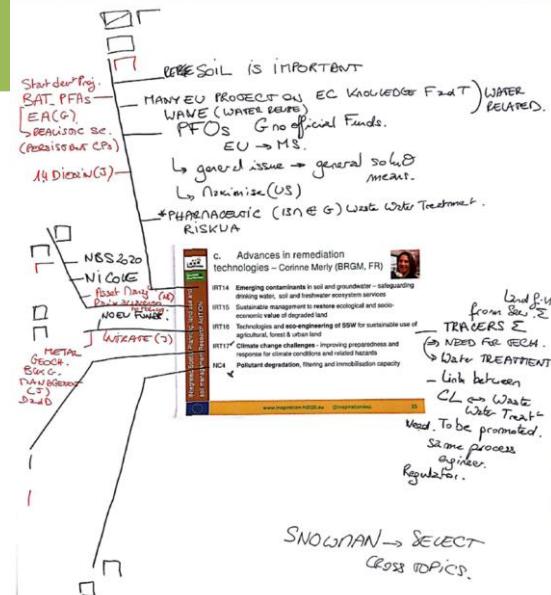
4



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Raw notes



SOIL IS IMPORTANT

Start dev Proj. BAT, PFAS
[EAG] → realistic sc. (Persistent CPs)

1,4 Dioxin (J) →

MANY EU PROJECTS ON EC KNOWLEDGE Fwd T (WATER RELATED).
WAVE (WATER RELATED)
PFOAs G no official Funds.
EU → MS.

↳ general issue → general solns
↳ maximize (US)

PHARMACEUTICAL (13ME) Waste Water Treatment.
RISKWA

NSS 2020 → NICOLE
Waste Water Treatment (EU)

NOEU Project →

WATER (EU)

METAL
BENZ
Dioxin
Dioxin

c. Advances in remediation
technologies – Corinne Merly (BRGM, FR)

RTT14 Emerging contaminants in soil and groundwater – sequencing
drinking water, soil and freshwater ecosystem services

RTT15 Sustainable management to restore ecological and socio-
economic functions of soils and land

RTT16 Technologies and eco-engineering of BSW for sustainable use of
agricultural, forest & urban land

RTT17 Geohazard management – planning preparedness and
response for climate conditions and related hazards

RTT18 Pollutant degradation, fixation and immobilisation capacity

NCA

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LAND P. 14
from Sec. 2
TRACERS E
NEDD FOR EACH.
Water TREATMENT
- link between
CL and Waste
Waste Treatment
Need to be promoted,
same process
aspirer.
Regulator.

SNOWMAN → SELECT
CROSS TOPICS.



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5



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Points of discussion

IRT14 – Emerging contaminants

- 3 main types of emerging contaminants where discussed: PFOAs, Pharmaceuticals, 1,4Dioxin
- Some projects and initiatives are already engaged on (Waste) Water on these substances (Fate & Transport) at EU and national levels
 - WAVE (Water Re-use)
 - RISKWA (Pharmaceutical, 13MEuros – Waste Water treatment)
- Need for technologies for Soil / Subsurface Remediation / Management

PFOAs:

- German EA start a development project on BAT. As PFOAs are persistent contaminants, building realistic management scenario is foreseen as a possible management option.
- PFOAs are a general issue, so need for general solution/means. In order to maximise the outcomes and outreach of the research, programmes such as American ones could be implemented at EU level



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6



Points of discussion

IRT15 – Restoration of **ecological** and **socio-economical** value of land

- H2020 calls on NBS exist
- NICOLE shift from Contaminated Land Management to Sustainable Land Management shows that IRT15 is a subject of interest
- In the NL, assets management aims to raise the awareness of the need for these types of restoration to Policy / Decision makers



Points of discussion

IRT16 – Advanced Remediation technologies

- Need to promote technology transfer from the Water sectors (Waste / Treatment) to the Contaminated Land sector. For the water sector, processes, engineering, tracer systems are available.
- No dedicated EU funds
- Remediation solutions for nitrate management is needed in Japan
- Need for metal geochemical Background Management in Japan



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Points of discussion

General funding remark

- SNOWMAN network is ready to take on board some of the Aquaconsoil research needs if there are of cross topics interests for SNOWMAN members

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