



Integrated Spatial Planning, land use and
soil management Research ActTION



Advances in remediation technologies

– Corinne Merly (BRGM, FR)




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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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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Raw notes

SOIL IS IMPORTANT

MANY EU PROJECTS ON EC KNOWLEDGE F&T

WATER RELATED

PFOs

EU -> MS

general issue -> general solution MEANT

NORMANISE (US)

PHARMACEUTIC (13MEG) Waste Water Treatment RISKWA

NBS 2020

NICOLE

WATER (2)

METAL

GROU

EURO

FUND

DAND

RT14 Emerging contaminants in soil and groundwater - sequencing, monitoring, soil and groundwater ecosystem services

RT15 Sustainable management to restore ecological and socio-economic value of degraded land

RT16 Technologies and eco-engineering of BSW for sustainable use of agricultural, forest & urban land

RT17 Climate change challenges - improving preparedness and response for climate conditions and related hazards

RT18 Pollutant degradation, filtering and immobilisation capacity

RT19

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2nd P.M. from S.E.

TRAVERS E

NEED FOR TECH.

Water TREATMENT

Link between CL on Waste Water Treat-ment. To be promoted. Same process by engineer. Regulator.

SNOWMAN -> SELECT CROSS TOPICS.

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Points of discussion

IRT14 – Emerging contaminants

- 3 main types of emerging contaminants were 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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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


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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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