INtegrated Spatial PlannIng, land use and soil management Research ActTION

INSPIRATION – Linking Europeans' Strategic Research Agenda on Spatial Planning and Land Use Management with AquaConSoil themes

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AquaConSoil conference, Lyon, 29 June 2017

AquaConSoil Lyon 2017

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Agenda of this session

1. Introduction: The unique INSPIRATION approach – Stephan Bartke
2. Key note: The importance of the soil-water-sediment system for land management – Linda Maring
3. INSPIRATION's Strategic Research Agenda, highlighting identified research topics related to integrated spatial planning, urban and contaminated land management – Paul Nathanail
4. Delegate discussions in facilitated groups focused on the AquaConSoil topics

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Why we need another research agenda!?!

- **Aim: Knowledge for sustainable soil, land-use and land management in Europe**
- Current and future **societal challenges** need research for
  - informed land-use management and evidence-based policies
  - greener and smarter use of the services provided by the land and soil-sediment-water system
- Our means: **Strategic Research Agenda (SRA)**
  - **Bottom-up** development and implementation
  - Establishing a **transnational network**

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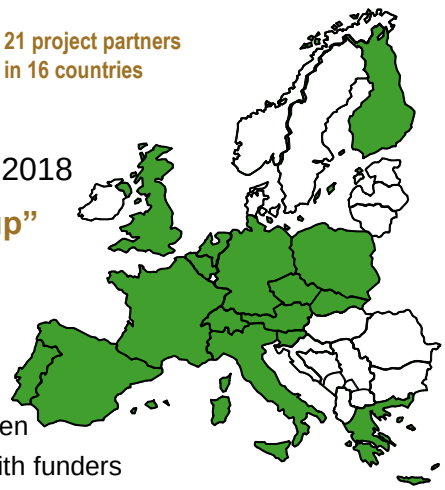
INSPIRATION – Integrated spatial plannIng, land use and soil management research action

21 project partners in 16 countries



- March 2015 to February 2018
- **Consequent "Bottom-up" approach:** needs of stakeholders define the of topics for the SRA
  - No silo-thinking
  - Relevance – demand-driven
  - Transfer – engagement with funders

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INSPIRATION – a unique research agenda: Demand driven

- Involving >500 experts from politics, industry, end-users, science and funders
- In each country collection of
  - research and innovation demands
  - status science-policy and -practice links
  - national funding instruments
  - transnational funding instruments

22 project partners in 17 countries

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The importance of the soil-water-sediment system for land management

Linda Maring
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Why we are making the SRA?

- Current and future societal challenges need research to close knowlegde gaps
  - Prerequisite for informed land use and evidence based policies
  - Smarter use of the services provided by land and the Soil Sediment Water (SSW) system

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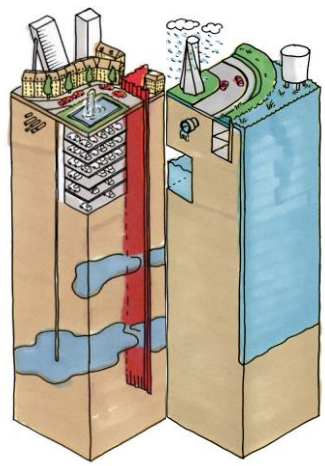
SSW SYSTEM



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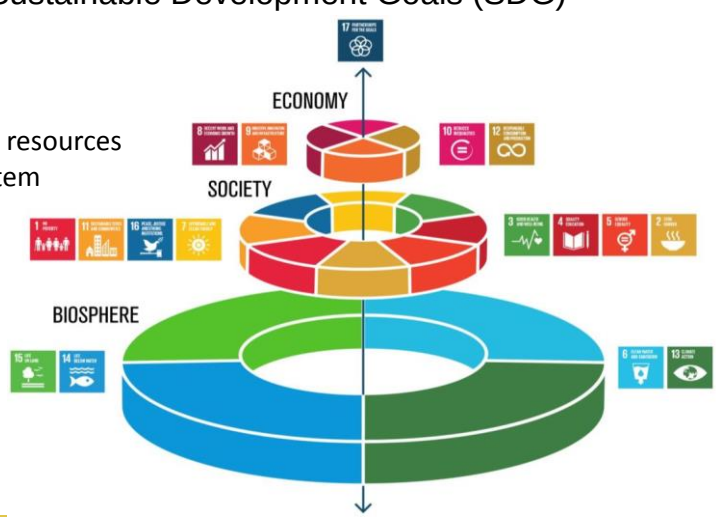
SSW SYSTEM

- Soil and Sustainable Development Goals (SDG)
  - 4 x soil
  - 29 x land
  - 22 x water
  - 3 x natural resources
  - 10 x ecosystem



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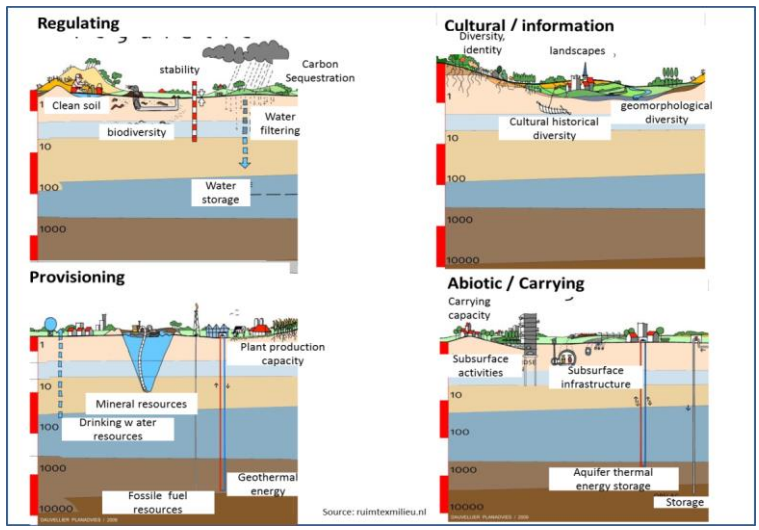
Ecosystem functions and services



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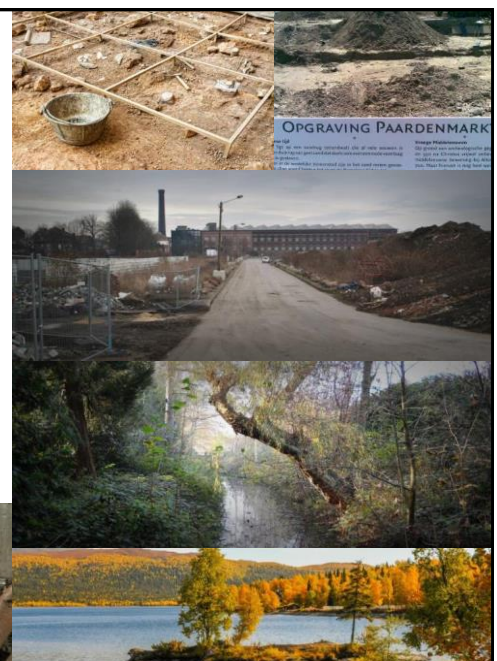
Cultural

Landscapes
Identity, diversity
Information

(Irreversible) damage
Loss of value



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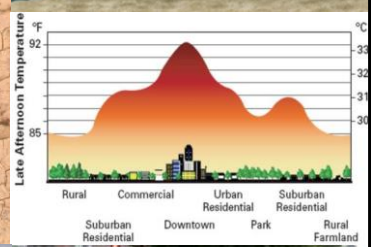
Regulating

Cycles
Climate mitigation

(Irreversible) damage
Decreased resilience
Shortages / surpluses



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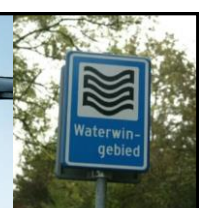
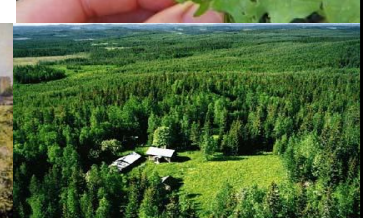
Provisioning

Production of food, fibre and fodder
Water supply for different purposes

Decreased resilience
Shortages
Exhaustion of the system





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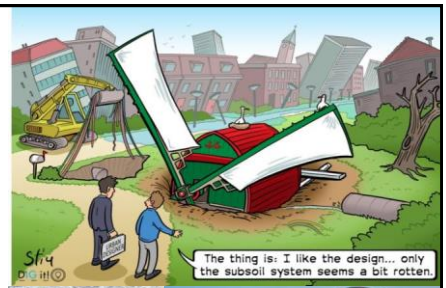
Abiotic

Resources
Sustainable energy
Carrying functions
Space

(Irreversible) damage
Unexpected effects of activity
Limited supply
Support of the public



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Thank you

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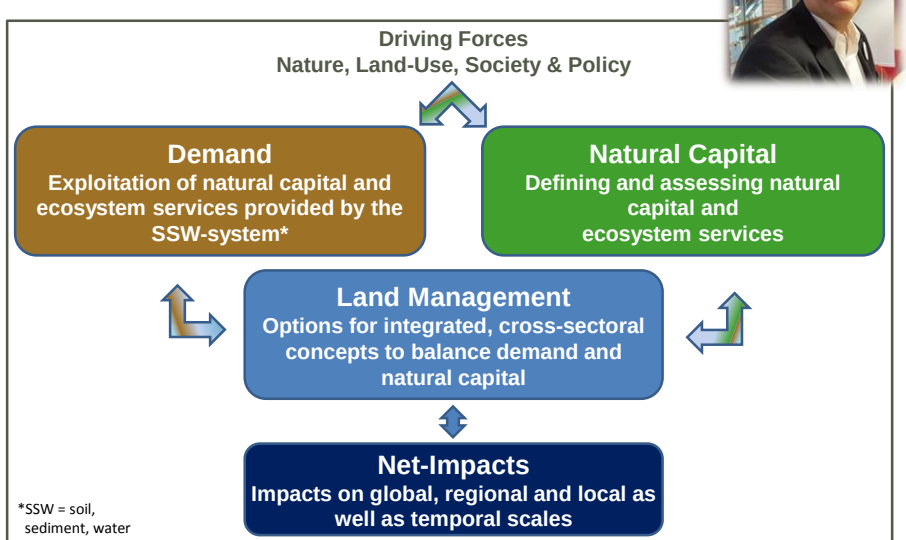
39: 17 + (7 + 7 + 4 + 4)



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UN Sustainable Development Goals (SDG)

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UN Sustainable Development Goals (SDG): INSPIRATION

The AquaConSoil themes at a glance

- Assessment and monitoring of soil, water and sediment quality
- Risk assessment
- Advances in remediation technologies
- Strategies & policies for pollution management & remediation
- Reuse & upgrading of land, water & sediment: circular economy
- Sustainable use & spatial planning of the subsurface

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Assessment and monitoring of soil, water and sediment quality – Valérie Guerin (BRGM)

IRT 1	Harmonised, statistically robust soil assessment & monitoring
D 2	Map, assess, regulate ecosystem services
IRT 15	Restoring ecological & socio-economic value of degraded land
IRT 16	Innovative technologies & eco-engineering for on-site monitoring, soil quality & plant cover
NI 1.1	Net impact of changing SSW on human well-being & prosperity; effects of contaminants on organisms & ecosystem services

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Risk assessment – Annette Gatchett (US EPA)

IRT 14 Harmonized methods for sampling, analyses and risk assessment of **emerging contaminants** in SSW

NI 1 Health risk assessment with **uncertain inputs**

NI 1.3 Systematic and comprehensive risk assessments of combined risks (ecological, technological & economic)

N! 2.3 Understanding effects from diffuse contaminant sources? cumulative contributions from many "small" sources"? Effect of contaminant mixtures? Impact of contaminant sinks?

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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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Strategies and policies for pollution management and remediation – Stephan Bartke (UBA, DE)

IRT13 Urban Metabolism – Enhance efficient use of soil-sediment-water resources through a closing of urban material loops

D2 Regulating Ecosystem Services

D3 Urban / infrastructure land

D7 Health and quality of life (living environment)

LM 1 Governance, management mechanisms, instruments and policy

LM 3 Land as a resource in urban areas (Sustainable urban land management)

LM 4: Land as a resource in rural areas (Multifunctionality of rural areas)

NI 3 Trade-off analysis & decision support

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Reuse & upgrading of land, water & sediment in a circular economy – Margot de Cleen (RWS, NL)

IRT2 Recognizing the value of ecosystem services in land use decisions

IRT5 Integrated scenarios for the Land-Soil-Water-Food system under societal pressures and challenges

IRT6 Indicators of Soil-Sediment-Water-Energy system efficiency

IRT8 Circular land management

NC6 Geological resources

D1 The 4 F´s: Food, feed, fibre, (bio)fuel

D3 Urban / infrastructure land

D4 Water

NI4 Science-Policy-Society Interface

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Sustainable use & spatial planning of the subsurface – Linda Maring (Deltares, NL)

IRT3 Integrated tools for a holistic assessment of agricultural and forest land use

IRT4 Bio-Economy – unleashing potential while sustaining soils

IRT9 Policy to effectively reduce land consumption by settlements

NC1 Quantity, quality & health of soils, soil C, greenhouse gases

NC3: Water, water cycle

NC5: Prevention of erosion and mudslides

NC6: Geological resources

D5: Geological (and fossil) subsurface resources

D6: Natural hazard prevention and resilience

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Delegate discussions – objectives

- Delegate discussions in six tables focused on the AquaConSoil topics.
- At each table participants will
  - identify topics of particular interest,
  - identify potential funders and funding interests,
  - indicate their willingness to become engaged in implementing a key topic

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Delegate discussions

- Method: World Café style group discussions:
  - Select a group (max 3 * 15 min)
  - Write comments on flip-over
  - Facilitators guide discussion
  - Change to next table
  - Facilitators report interim result
  - Add your thoughts
- Session chair summarizes in plenum.

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Assessment and monitoring of soil, water and sediment quality – Valérie Guerin


Risk assessment – Annette Gatchett


Advances in remediation technologies – Corinne Merly


Strategies & policies for pollution management & remediation – Stephan Bartke


Reuse & upgrading of land, water & sediment in the circular economy – Margot de Cleen


Sustainable use & spatial planning of the subsurface – Linda Maring

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Get engaged

a. Leave your business cards to
   - Subscribe to INSPIRATION newsletter
   - Receive invitation to final conference

b. Contact your national contact points
   - Find them on our website www.inspiration-h2020.eu

c. Join our final conference

World Soil Day

5 December 2017

INSPIRATION Conference

4 – 6 December 2017

Brussels, Belgium

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