INTRODUCTION TO TRANSNATIONAL RESEARCH COL-LABORATION: THE SNOWMAN EXPERIENCE & REPORTS FROM PREVIOUS SNOWMAN PROJECTS

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Co-Authors from Bert van Goidsenhoven (OVAM); Frédérique Cadière (Ademe)

Why Motivation and problem statement

Presentation on the experiences gained in the SNOWMAN network on transboundary collaboration, e.g. recent calls, involved countries, main results. Experiences related to transnational funding and collaboration, through some soil research project testimony and results obtained from a questionnaire sent to researchers funded by SNOWMAN Discussion on the added value of transnational research funding and collaboration, and recommendations for future initiatives.

What Approach, results and key messages

SNOWMAN was firstly an eranet project under the 6th Framework Program. Since 2009, it is a self-funded network of research funding organisations and administrations on sustainable management of soil [and groundwater] in Europe. Its main intention is to minimize administrative constraints experienced in EU co-funding procedures and support joint funding interest and national flexibility. This network pay a special attention to the dissemination. They initiate a SNOWMAN landscape of funded projects on their thematic. They also published Policy Brief.

During the workshop they shared their call procedure, from the elaboration of the call to the call itself and the contracting phase.

They shared also the experience though the testimony of several project leader of SNOWMAN funded project and through the result of a questionnaire sent to all project leader funded by SNOWMAN
Main messages are the following:

- Medium size of the network appreciated
- Call flexibility (funders priority, national rules)
- Numerous network interactions (TC's)
- Mismatch between budget and proposals
- Strong secretariat is a key element
- Time for call preparation is significant

Key Conclusion and take home message

Willingness of the SNOWMAN network to initiate A European network for soil research funders : i.e. A group of European research funders and administrations that aims to bridge the gap between knowledge demand and supply in the field of sustainable soil management.

There are challenges to face:

- Soils are a stategic issue for humans and ecosystems, soil threats are still going on.
- There is no coordinated research at an European level, soil thematic research is split in different research programmes

INTRODUCTION TO TRANSNATIONAL RESEARCH COLLABORATION: THE SNOWMAN EXPERIENCE & REPORTS FROM PREVIOUS SNOWMAN PROJECTS

- Need for a strong soil research agenda coordinated at EU level and with a higher visibility

What to gain with such a network?

- New knowledge, methodology, decision support tools for a sustainable soil and land management
- Applied research, oriented on end-users' needs, including dissemination and science-policy interface
- Joint funding increase return on investment by sharing all results among all committed funders, with a flexible call procedure
- Complementarity of competences, diversity of approaches enables to answer more scientific questions and avoid redundant research project in several countries.

More Further reading

Slides of the presentation made

Proposal for a European network of funders to implement the INSPIRATION Strategic Research & Innovation Agenda for soil use, land management and spatial planning

Welcome to funders' sessions

Isabelle Feix, ADEME
Stephan Bartke, UBA

This session's organization

14:00 Introduction to transnational research collaboration: The Snowman experience | Auditorium

14:30 Parallel sessions

INSPIRATION match-making
Terra | Sylva | Aqua
14:30 - Funders meetings I
15:00 - Funders meetings II

Transnational collaboration
Auditorium
14:30 - Experiences & results from 5 projects

15:30 Joint break

16:00 - Funders meetings III
16:30 - Funders meetings IV

16:00 - Discussion & advise for future initiatives

17:00 Joint closing session

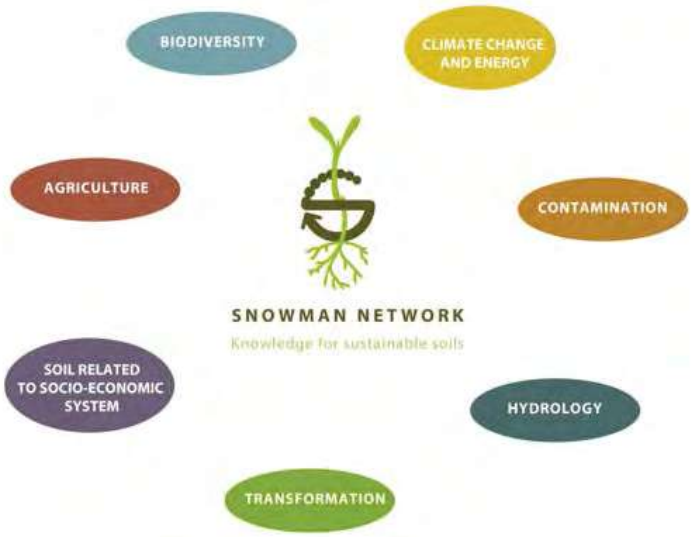
This session‘s organization

INSPIRATION match-making

- **Objective**:
  Enable funders to decide appetite for further match making and on next action after the event,
  + if possible: identify a lead contact person for specific actions
- Each registered funder receives an **individual agenda** based on interests in SRA topics in the web database
- Funder = providing financial resources,
  grant makers (public, private, trusts …) with collaboration intention

Transnational research collaboration

Esther Goidts, Soil Protection Direction, Public Administration of Wallonia
Yvonne Ohlsson, Swedish Geotechnical Institute



SNOWMAN NETWORK

Knowledge for sustainable soils

SNOWMAN NETWORK

Introduction to transnational research collaboration: the SNOWMAN experience…

… *And potential for future collaborations*

Esther Goidts, Public Administration of Wallonia (BE)
Yvonne Ohlsson, Swedish Geotechnical Institute

Outline

1. **Network first steps & evolution**
2. **Knowledge development & dissemination**
3. **Call procedure & experience**
4. **Feedback from researchers**
5. **New network potential**

1. Network first steps & evolution

- ERANET from 2003 to 2009 (6th Framework Program)
  - On management of contaminated sites
  - To establish a network of research funders to execute joint calls for research projects

=> pilot Call 1 in 2006 (FR, SE, BE, NL, UK, DE, AU, IT, CZ)
Topics : strategies and related tools for sustainable management of land contamination
=> Call 2 in 2009 (start of the call) (FR, SE, BE, NL, AU, RO)

- From 2009 : self-funded network of research funding organisations and administrations on sustainable management of soil [and groundwater] in Europe

Intention to minimize administrative constraints experienced in EU co-funding procedures and support joint funding interest and national flexibility

1. Network first steps & evolution

=> Call 2 finalised in 2009 (FR, SE, BE, NL, AU, RO) – 1,8M€

Topics : Areal management of contaminated soil and groundwater, integration of soil management into spatial planning, use of contaminated land for biofuel crop production

3 projects funded/12 submitted

=> Call 3 in 2010 (FR, SE, BE, NL) – 2 M€

Topics : Soil functions and ecosystem services, sustainable agriculture and forestry, contamination

6 projects funded/15 submitted

=> Call 4 in 2012 (FR, SE, BE, NL) – 1,8 M€

Topics : relationship between soil and social and economic sciences

3 projects funded/8 submitted

1. Network first steps & evolution

Scope – research themes

- **transformation processes on soil functions**
  physical, chemical and biological processes as a basis for ecosystem services
- **biodiversity**
  role of soil in maintaining diversity of species
- **hydrological system**
  interaction of soil and (ground)water
- **climate change and energy supply**
  role of and effects on soil, including carbon cycles
- **sustainable agricultural production**
  high yields while maintaining soil fertility
- **contamination**
  risk assessment of human health, ecology, risk reduction technologies
- **socio-economic factors**
  impact and influence of socio-economic factors on soil functions





1. Network first steps & evolution

Network partners from several countries and administrations:

- **France** - ADEME – Call 1, 2, 3 & 4
- **Sweden** - FORMAS – Call 2, 3 & 4
- **Austria** - KPC – Call 2
- **Belgium**, Flanders - LNE – Call 2 & 3
- **France**, MEDDE – Call 3 and 4
- **Belgium**, Flanders - OVAM - Call 1, 2, 3 & 4
- **The Netherlands**, SKB - Call 1, 2, 3 & 4
- **Sweden** - SEPA - Call 2 & 3
- **Belgium**, Wallonia - SPW-DGARNE – Call 3 & 4
- **Germany** - UBA – Call 1
- **Romania** - UEFISCSU – Call 2
- **UK** - UK EA – Call 1

2. Knowledge development and dissemination

Special attention to dissemination!

- Dissemination part mandatory within the project (website, conferences, publications, …)
- A Knowledge Dissemination Task Team within SNOWMAN network to support projects and enhance dissemination during and after project time

During project time :

- All-projects meetings! (Kick-off, mid-term, end)

=> Collaborations and exchanges promoted

2. Knowledge development and dissemination

Special attention to dissemination!

After project time :

Website,
Newsletter, …

SNOWMAN Landscape

Thematic Policy Briefs

http://snowmannetwork.com/

Follow-ups &
sharing of performed dissemination

3. Call procedure & experience

- **Network strategic objectives:**

1. **Implement Research agenda of the network through transnational regular calls**

1. **Update of the Research agenda based on needs identified (gaps/challenges)**

2. **Transnational dissemination of the knowledge acquired**

3. **Development of partnership with new funders**

3. Call procedure & experience

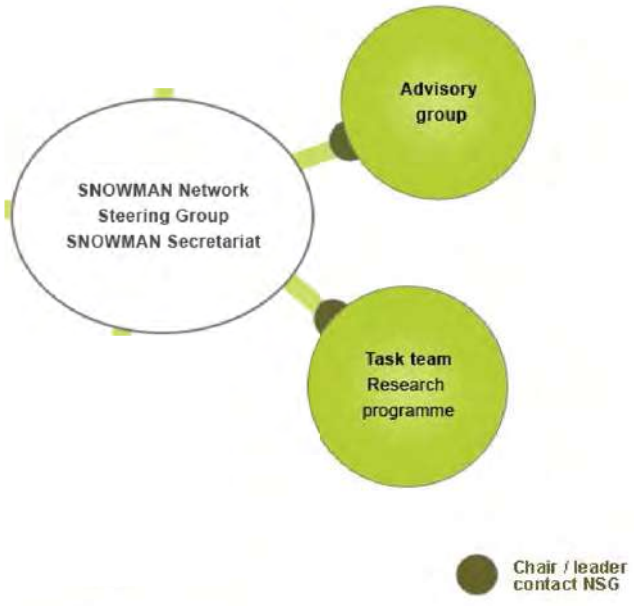
- **Network hub**

3. Call procedure & experience

- **Network hub**

3. Call procedure & experience

- **Network hub**



3. Call procedure & experience

- **Network hub**

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- **Network hub**

3. Call procedure & experience

- **Network hub**

3. Call procedure & experience

- **Call process**

<u>1. Research Agenda definition</u>

- Overall agenda
- Technical scope for a specific call
- Now INSPIRATION?

<u>2. Call:</u>

1. ***Preparation phase (funders)***
   - Voting matrix & budget (*Virtual Pot with Juste Retour model*)
   - Draft Letter of Commitment

   => Coordinated call principles and procedures to endorse

3. Call procedure & experience

- **Call process**

2. Execution phase

- Signature of Letter of Commitment
- **Call Steering Committee** nominated by funders
  Call Secretariat funded by funders participating in the call
- **Launch of the Call** (topics and constraints)

  Applicants'guide + application form (part A & B)

- **Checks: eligibility** (secretariat), **fundability** (funders), **fit to call** (CSC)
- **peer reviewing** (advisory board)**, evaluation report**
- **funding evaluation** (Call Steering Committee)

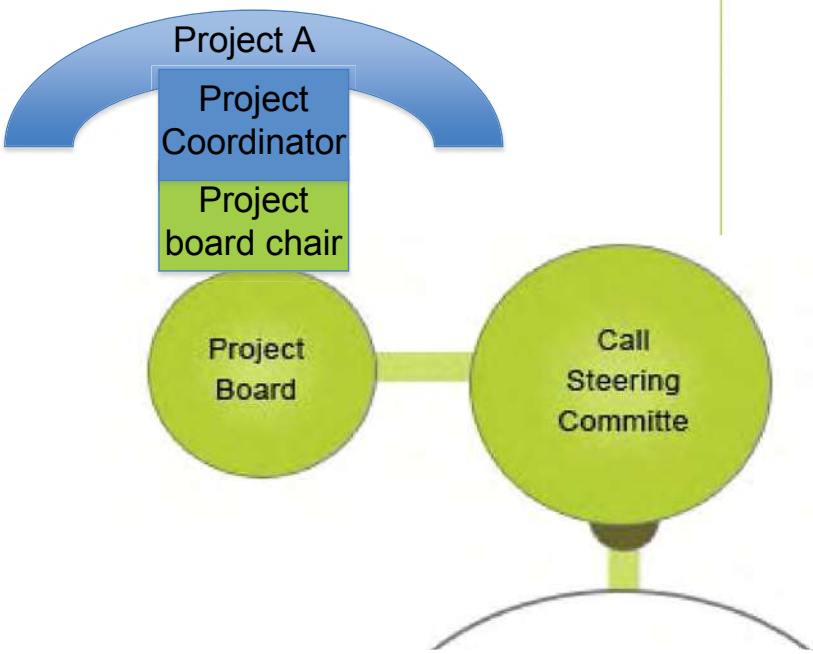
  short list : Offer funding / Reserve List / Reject

3. Call procedure & experience

- **Call process**

3. Contracting phase

- **Confirmation Letter from funders and project Board setting**



3. Call procedure & experience

- **Call process**

  3. Contracting phase

  - **Consortium agreement between researchers**

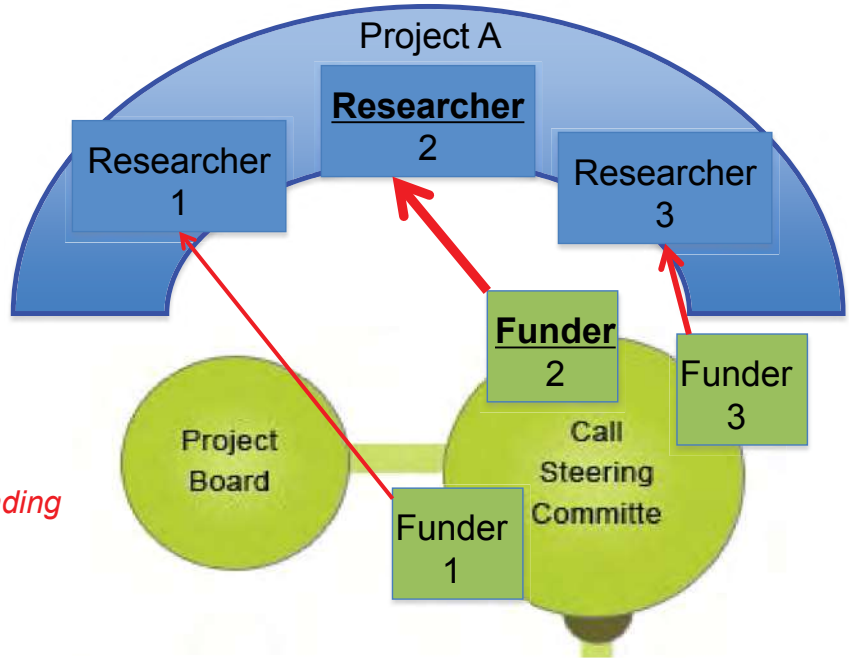
Consortium agreement binding researchers

3. Call procedure & experience

- **Call process**

  3. Contracting phase

  - **Funding : Virtual Pot with Juste Retour model**



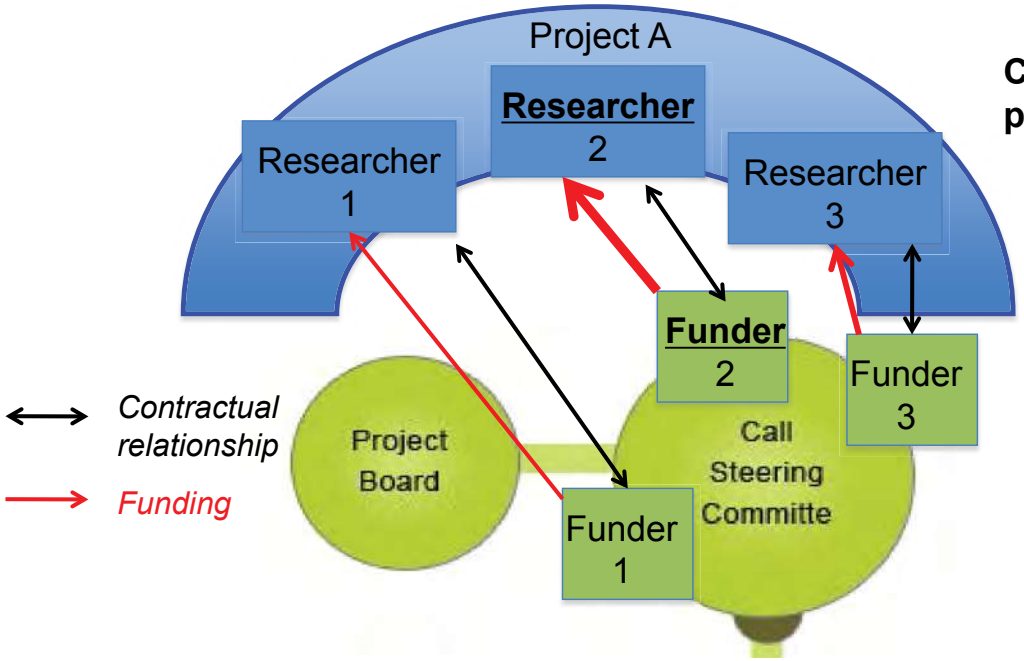
Funding

3. Call procedure & experience

- **Call process**

  ### *3. Contracting phase*

  - **Funding : Virtual Pot with Juste Retour**



Contract include 3 parts:

1) national rules

2) SNOWMAN specific terms & conditions

3) technical annex (project)

Project duration (2-3 yrs)

3. Call procedure & experience

- **Call experience**

  - **Call documents**
  - **Medium size of the network appreciated**
  - **Call flexibility (funders priority, national rules)**
  - **Numerous network interactions (TC's)**

  - **Mismatch between budget and proposals**
  - **Strong secretariat is a key element**
  - **Time for call preparation is significant**

2017 - No calls, but planning for the future!

What comes out of the INSPIRATION-project?

Is there a potential for a new funders platform?

Could the SNOWMAN experiences be used in such a platform?

What do the SNOWMAN project participants think?

4. Feedback from SNOWMAN researchers

Questionnaire sent previous to this conference

Objectives:

- *to explore what added value of transnational research funding and collaboration the researcher experienced, and*

- *to collect their recommendations for future initiatives*

4. Feedback from SNOWMAN researchers

- **Will be presented in the next session**

  Project leaders will give:

  - *Short summary of the project results*
  - *Examples of dissemination and communication*
  - *Provide their thoughts on:*
    1. *Added value of transnational research funding*
    2. *Critical challenges in planning / applying for or carrying out to SNOWMAN funded project?*

    And

  - *Provide their main recommendations for a future transnational research project calls for research:*

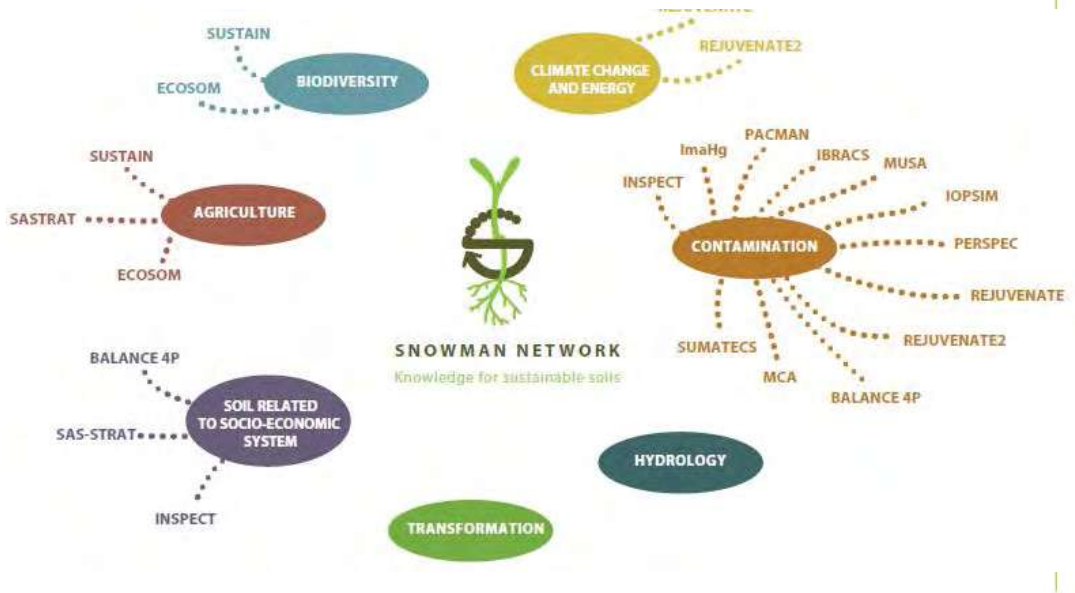
    1. *"elements to keep"*
    2. *"suggestions for improvements"*

Also a summary of the whole questionnaire later on today

5. New network potential

- **New opportunities for project funding:**
  - **INSPIRATION Strategic Research Agenda**

SNOWMAN landscape



=> Many common topics with INSPIRATION SRA

5. New network potential

- **New opportunities for project funding:**
  - **INSPIRATION Strategic Research Agenda**
  - **INSPIRATION Match-making of funders**
  - **SNOWMAN experience in call management**
  - **Cooperation with other soil networks**

=> New funding network?

2018 – Implementing the future

- Future calls?
- Partners?
- Research agenda
  - INSPIRATION?

Join us in discussions during sessions and match-making!

Or mail to info@snowmannetwork.com


Isabelle Feix


Esther Goidts


Yvonne Ohlsson


Bert van Goidsenhoven


Frédérique Cadière

BALANCE 4P

Jenny Norrman, Chalmers, CEE + Arch.

BALANCE 4P

Balancing decisions for urban brownfield regeneration – people, planet, profit and processes

Chalmers, CEE + Arch.: *J Norrman, Y Volchko, L Rosén, J-H Kain*
Deltares: *L Maring & S van der Meulen*
TU Delft, Dept of Urbanism: *F Hooimeijer*
VITO: *S Broekx, A Beames, K Touchant*
Enveco EEC: *M Ivarsson*
r3 Environmental: *P Bardos*

Forskningsrådet Formas
Formas främjar framstående forskning för hållbar utveckling

Subsurface in planning

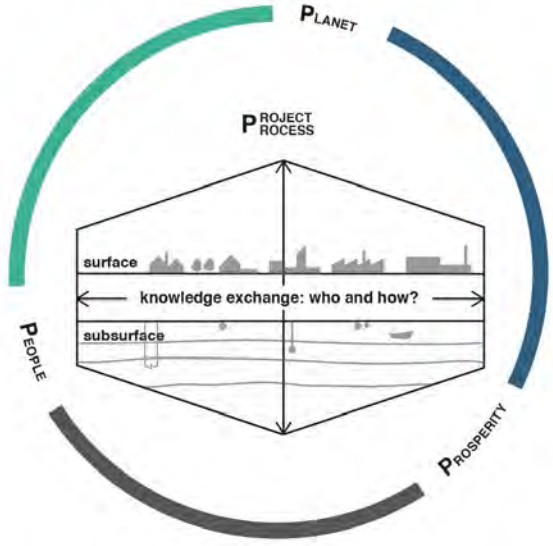
- Comparison of planning systems (NL, B, SE)
- Focus in project:
  - Knowledge exchange
  - Design/construct

TOPICS IN SURFACE PLANNING →		Heritage	Environment	Nature	Water
CHANCES FOR ENHANCING THE SUBSURFACE BY	Law and regulation	*Chances for:* - Including the subsurface in planning regulations about heritage, environment, nature and water - Including the subsurface in Environmental Impact Assessment and Water Assessment Test - Subsurface in zoning plans through paragraphs about heritage, environment, nature and water			
	Policy and vision	*Chances for:* - Visions on the subsurface in local and regional plans, local policies, as well as in individual projects			
	Knowledge exchange	*Chances for:* - Interdisciplinary cooperation - Developing new knowledge by cooperative learning			
	Design / construct	*Subsurface in plan and design process needs:* - Better frame of reference - Better instruments (subsurface potential map) - Cultural change from how it is done now			
CATEGORIES OF SUBSURFACE QUALITIES →		Civil constructions Soil	Civil constructions Soil Water Energy	Water Soil Energy	Water Soil Energy

Hooimeijer & Tummers, 2017. Integrating subsurface management in spatial planning in the Netherlands, Sweden and Flanders. *Urban Design and Planning Porceedings journal*, Paper 1600033, 12p.

Case studies + assessment and inventory of tools and instruments

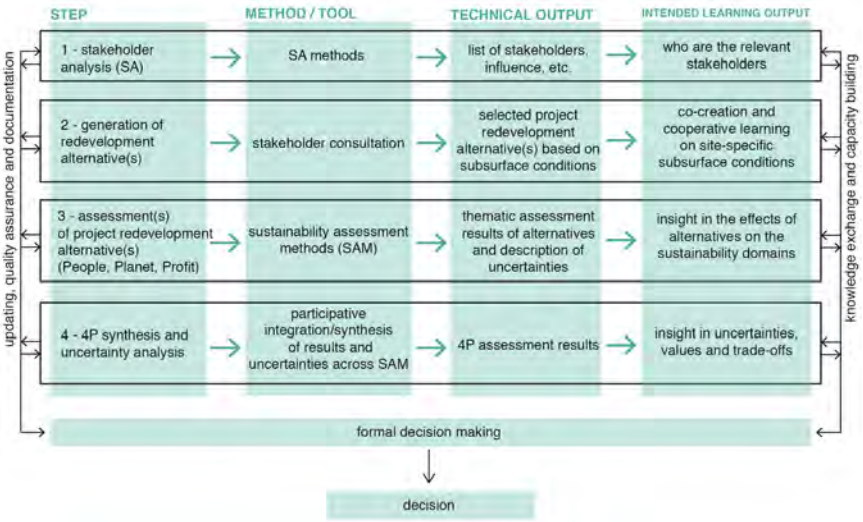
- Rotterdam
- Alvat
- Göteborg
- Instruments that asses 3P and enhance knowledge exchange between the surface and the subsurface sectors



Beames, A. et al., 2014. Sustainability appraisal tools for soil and groundwater remediation: How is the choice of remediation alternative influenced by different sets of sustainability indicators and tool structures? Science of the Total Environment, 470-471, pp. 954-966.

Suggested framework

- Working process including recommendations
- Combine methods from planning and decision support



Norrman, J. et al., 2016. Integration of the subsurface and the surface sectors for a more holistic approach for sustainable redevelopment of urban brownfields. Science of The Total Environment, 563-564, pp 879–889.

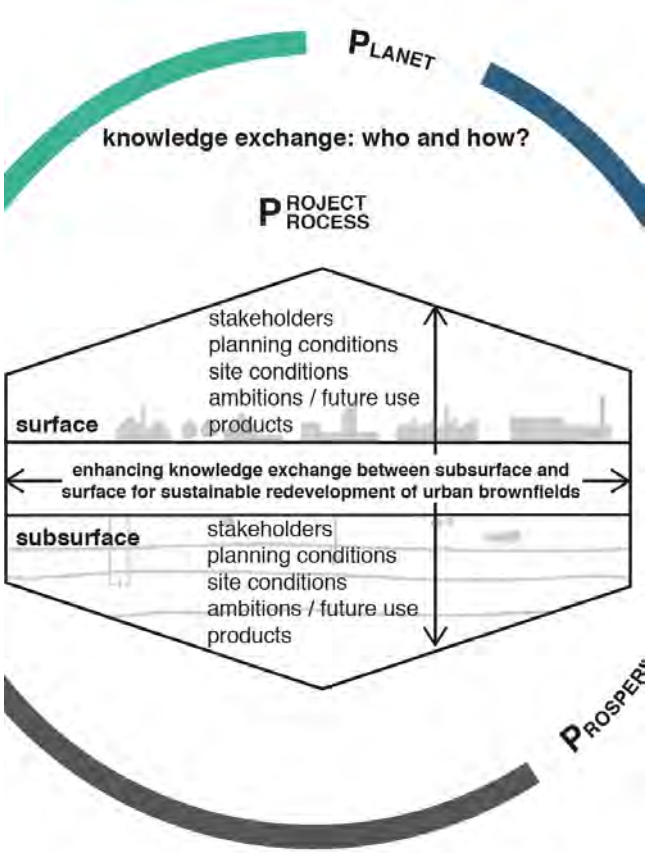
Dissemination activities

- Web: LinkedIn, web-page, SNOWMAN, summary
- Cases: workshops, exchange between cases and municipalities
- National branch conferences: 4
- Branch magazines: 2 planning, 1 remediation
- Students: workshops, study visit, internship, thesis work
- Reports: 3, all available on-line (+ report to funders)
- Int. conference/workshop presentations: 7
- Scientific papers: 3
- Proceedings (book): soil security
- SNOWMAN meetings & with other EU-projects

EXTERNAL COMMUNICATION			
Type of activity	**target group*)**	**Date**	**Weblink/documentatic**
Summary at the SNOWMAN website	1,3	June 2013	http://www.snowmanne ork.com/main.asp?id=2
Project website (at Chalmers website)	1,2,3,4	Nov 2013	http://www.chalmers.se n/projects/Pages/Balanc -4P.aspx
Posted project on the SNOWMAN landscape	1,3	Nov 2013	http://snowmanlandscap .com/projects/balance-4 balancing-decisions-for- urban-brownfield- regeneration-people- planet-profit-and- processes/
SNOWMAN knowledge dissemination meeting Paris, presentation (Jenny)	1	Nov 19-20, 2013	http://www.snowmanne ork.com/pagina1kolom. p?id=69
Project posted on LinkedIn, 14 members	2,4	Nov 2013	-
Publication of article in Dutch (spatial planning) magazine S+RO (Fransje, Linda)	2,3	Dec 2013	Hooimeijer, Fransje, Linda Maring (2013). Ontwerpen met de ondergrond. S+RO 2013/6, pp 52-56 http://repository.tudelft.r view/ir/uuid%3Ae6f9cbe -8cc5-4a2e-b706- d32224db2191/
Meeting with Andy Cundy from GREENLAND project (Linda, Fransje, Steven, Jenny)	3	Dec 2013	Dropbox
Abstract to AESOP Association of Schools of Planning (abstracts to Dec 31), Fransje sent abstract, dec 31 2013. *Not accepted.*	2,3	March 7-9	http://www.aesop-planning.eu/
Publication of review paper in STOTEN (Alistair, Steven, Kaat et al.)	3	Feb 2014	http://www.sciencedirec com/science/article/pii/S 048969713011881
Renare Marks vårmöte 2014, oral presentation (Jenny).	2 (Swedish branch) + 3	April 2 2014	http://www.renaremark. /filarkiv/konferens/2014/ armote2014/presentatio er/10_Balance_4P%20. nny%20Norrman%2014 402.pdf
Stakeholder workshop Rotterdam I (Linda, Fransje, Kaat, Jenny)	1,2	March 31	Dropbox
Student workshop in Göteborg, Fixfabriken (Jenny, Fransje, Linda, Jaan-Henrik)	1,2	April 24-25	Dropbox
Presentation on Balance 4P to municipality (Urban planning office) of Göteborg (Jenny, Fransje, Linda, Jaan-Henrik)	2	April 25	Dropbox
Presentation of Fixfabriken student workshop results to municipality and developer (Jenny, Fransje, Linda, Jaan-Henrik, Lars, Yevheniya)	1,2	April 25	Dropbox
Web-meeting with the HOMBRE project (Jenny, Linda)	1	April 25	-
Student workshop in Rotterdam (Fransje)	1,2	May 8-9	Dropbox

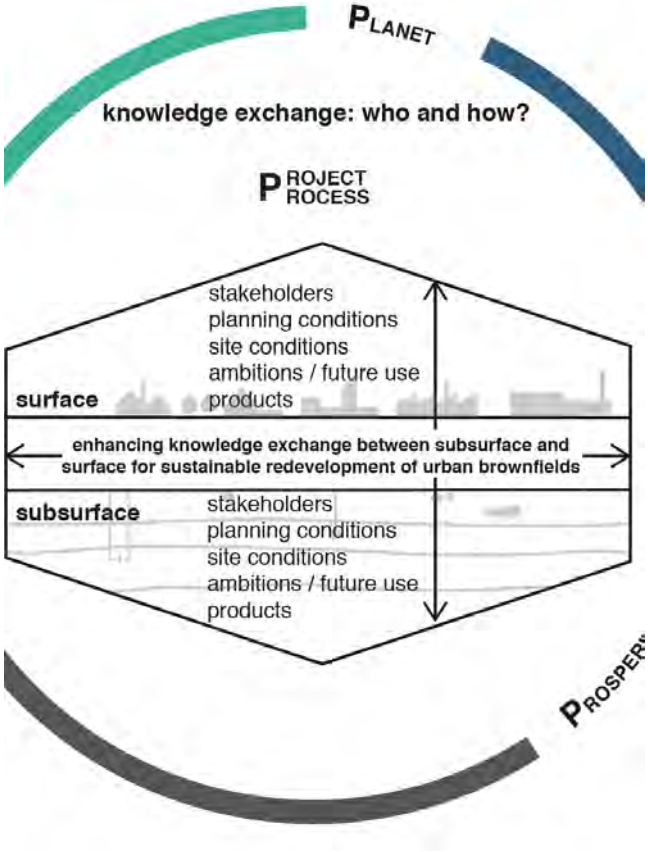
Lessons learned: added value

- Knowledge sharing across countries (and across disciplines)
- Increased dissemination possibilities
- Project size – manageable!
- Expanding researchers network, and in our case also to include a lot of other stakeholders
- FUN!



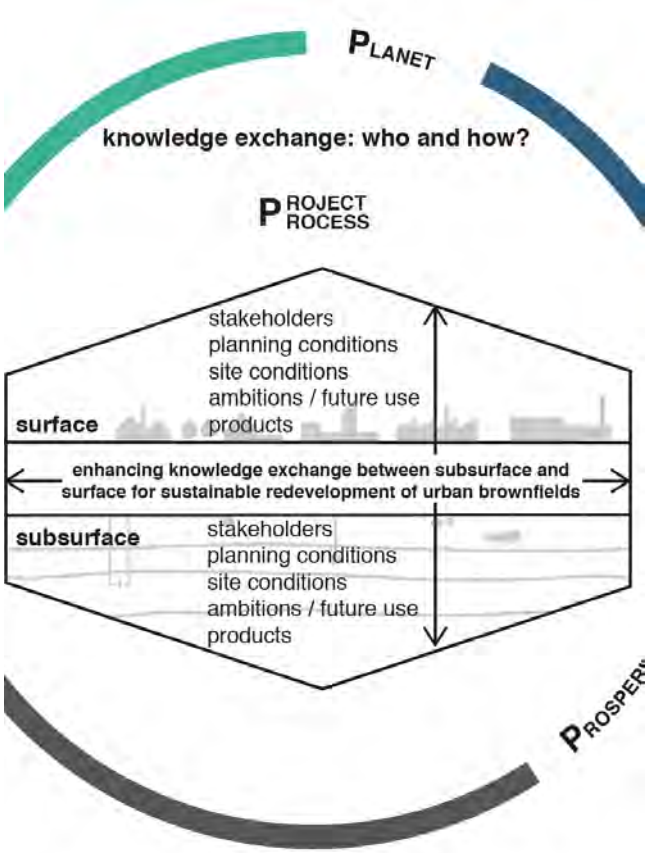
Lessons learned: critical challenge

- Funding for different time periods
- Different levels of funding and different demands on co-funding
- Balance application procedure and amount of funding
- Heavy on reporting administration (SNOWMAN + all 3 funders)
- Different praxis and regulations in the different countries
- Different disciplines (this was also the most rewarding challenge!!)
- Personnnel



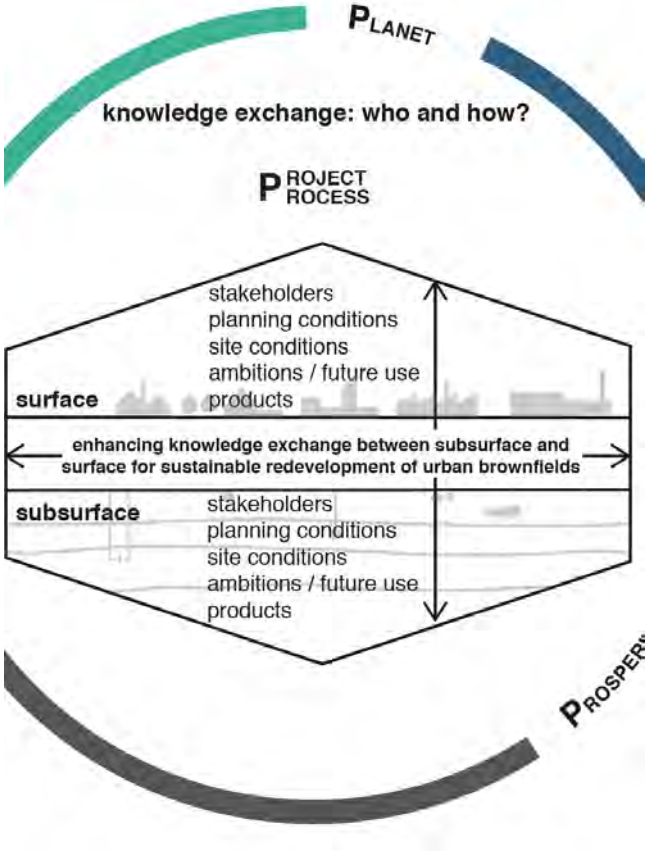
Main recommendations: elements to keep

- Possibility to get feedback and improve application (or possibly have a 2-stage application procedure)
- Knowledge dissemination meetings with all projects
- Easy administration of funding – directly from each national funder
- Supportive and flexible secretariat



Main recommendations: suggestions for improvement

- Coordinate reporting
- Avoid different funding periods within projects, avoid different levels of funding and different rules
- Knowledge dissemination meetings
  - Make sure technology works!
  - One part workshop or more informal meetings to increase knowledge sharing



CHALMERS

World Soil Day

European Commission

Urban Soils Project

Marcel Marloie, Latio.org

Inspiration

UMR 7206
CNRS – Muséum National d'Histoire Naturelle - Université Paris Diderot

SNOWMAN Network : Lessons from past for future collaborative funding

URBAN SOILS Project: How to better use soils to face the urban challenge?

LOUIZA BOUKHARAEVA: Project Coordinator
MARCEL MARLOIE : Project Manager

World Soil Day

WORLD SOIL DAY 2017 – Land, Soils and Science

RESULTS OF THE PROJECT

1.1. Allotment gardens sector of Russia and European countries - Quantitative analysis

Sub regions	Plots In thousand	City dwellers accessing to parcel (%)	Total areas (1000 ha)
Russia	16 900	31,7	1 562
Baltic Countries	78	4,3	3,4
Former socialist countries with allotments	1970	12,1	109
Former socialist countries without allotments	0	0	0
Germanic and Scandinavian countries	1 400	3,3	63
Western European countries	6312	1,0	17
Southern European countries	65	0,17	0,7
Total EU	4 145	2,7	192

RESULTS OF THE PROJECT

1.2. Allotment gardens sector of Russia and European countries – Qualitative analysis - Perceptions and practices - State of the art on recent research - Historical perspective - Characterization of the current period

SEVEN MODELS OF ALLOTMENTS		
	Allotments of vegetable gardens	Model 1: with open plots
		Model 2: with closed plots
	Allotments gardening with small houses → Family gardens → Leisure gardens → Ornamental gardens → Collective of dachas → Collectives of building lands	Model 3: medium multifunctionality = without the right to spend the night
		Model 4: extended multifunctionality = with the right to spend the night
		Model 5 : Shared gardens
	New collectives	Model 6: Specialized gardens (insertion, pedagogical, therapeutic)
		Model 7: New multifunctional collectives

RESULTS OF THE PROJECT

2. Results of recent research about Health and Gardening
Indicators for determinants of health: Stress levels - Physical activity – Violence - Socially profitable - Social contacts and cohesion - Fruit and vegetable consumption

3. Economic, social and environmental functions of Collective of allotments in the national accounts: in the case of transformation of agricultural land into collective gardens; land prices X 4; wealth produced X 16; equivalent jobs X 65.

4. Hypotheses to introduce a prospective research = change of scale in the creation of collective gardens in the coming decades. For instance 30% of citizens with access of a plot in a collective: more 2 millions hectares

5. Diagnosis of soil pollution problems with the provision of a guide helping garden organizations and public authorities to solve these problems

6. Children, soils and educational policies: Analysis of how urban children perceive soils, with pedagogical proposals for educational policies

DISSEMINATION

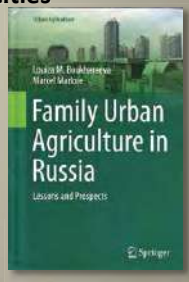
REALIZATIONS	TARGET AUDIENCE	DISSEMINATION TOOLS
1 Allotment gardens sector of Russia and EU	All audiences for paradigm shift	Deliverables on website Popular articles Books – Flyer Photographic exhibition
2 Health and Gardening	Scientific Community Public decision-makers General public	Seminar Deliverables on website Scientific articles - Flyer
3 Economic and social evaluation	Experts General public	Deliverables on website Popular articles Statistical Services Recommendations Flyer
4 Hypothesis for prospective research	All publics, scientists, actors, decision makers for paradigm shift	Deliverables on website Articles - Seminar Conferences - Flyer
5 Soil analysis and Road Map	Local communities Collective leaders	Deliverables on website Road Map with presentation articles - Flyer
6 Children and Soils	Ministries of Education Pedagogues	Booklet Recommendation for Ministries of Education Teaching materials - Flyer
Flyers are introduced in the Photographic exhibition		

SÉMINAIRES:

- **Gardening and Health, Oct. 2014 Utrecht**
- **Collectives of urban gardens in the ecological and solidarity transition Nov. 2017 PARIS**

PHOTOGRAPHIC EXHIBITION: "Working Soils in City: urban gardening at the service of sustainable cities"

BOOKS:



With 2 chapters from *Urban Soils*

Another one in preparation based on Urban Soils results

RESPONSES TO THE "SNOWMAN NETWORK: lessons from past for future collaborative funding"

1. ADDED VALUE OF TRANSNATIONAL RESEARCH FUNDING

1.1. Extension of partnerships, and network of contacts for investigations:
→ through SNOWMAN network, CNRS team identified the partnerships with:
→ RIVM, institution of which we have no equivalent in France
→ GxABT who declared itself available for that research
at the time of the project definition

1.2. Assistances for access to field research:
- RIVM organized several field visits for CNRS team investigations;
- GxABT organized several field visits for CNRS team investigations, and established contacts with a school in Liège for work with schoolchildren;
- CNRS team favored GxABT's contacts in France, Spain and the United Kingdom for soil analyzes

1.3. Confrontation with other ways of working: knowledge of other ways approaches problems, which allow the emergence of new manners to move forward differently

RESPONSES TO THE "SNOWMAN NETWORK: lessons from past for future collaborative funding"

2. CRITICAL CHALLENGES

The duration. It took us four years and a little more by having a salary over three years. Resolute by working longer.

Dissemination is a process that began during the project and then continues for several years. Everything cannot be done during the project.

Main recommendations for a future transnational research project call for research

Elements to keep

Combination of sciences of the nature and Human and Social Sciences.

Possibility of treating soils from the point of view of big societal challenges.

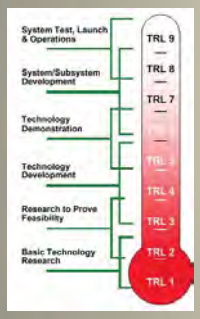
Allow the circulation of the proposals of the teams that can join the project

Main recommendations for a future transnational research project call for research

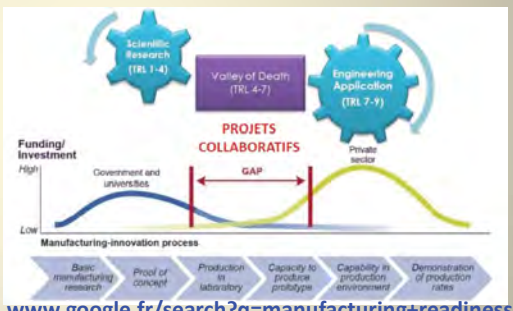
Suggestions for improvements

More flexibility for subcontracting

Candidates may be invited to situate their approach in relation to a diagram that could be inspired by the TRL (Technology Readiness Levels) scale



https://en.wikipedia.org/wiki/Technology_readiness_level



www.google.fr/search?q=manufacturing+readiness+level&rlz=1C1AVNG_enFR683FR687&tbm=isch&tbo=u&s

Outline of a questionnaire:

Work Packages	Addressed to which public : Scientific community - Public decision-makers - Companies - Civil society organizations?	Appropriate dissemination tools: Seminars - Internet - Articles - Books - Movies - Audiovisual Equipment - Exhibitions - Flyers - Notes ...
1		
2		

OTHER QUESTION: how is the target audience associated or consulted at some steps of the research process?

IBRACS

Dan Berggren Kleja, Swedish Geotechnical Institute

INSPIRATION – SNOWMAN session

4th December 2017 - Brussels

Enhanced knowledge in mercury fate and transport for Improved Management of Hg soil contamination

Partners

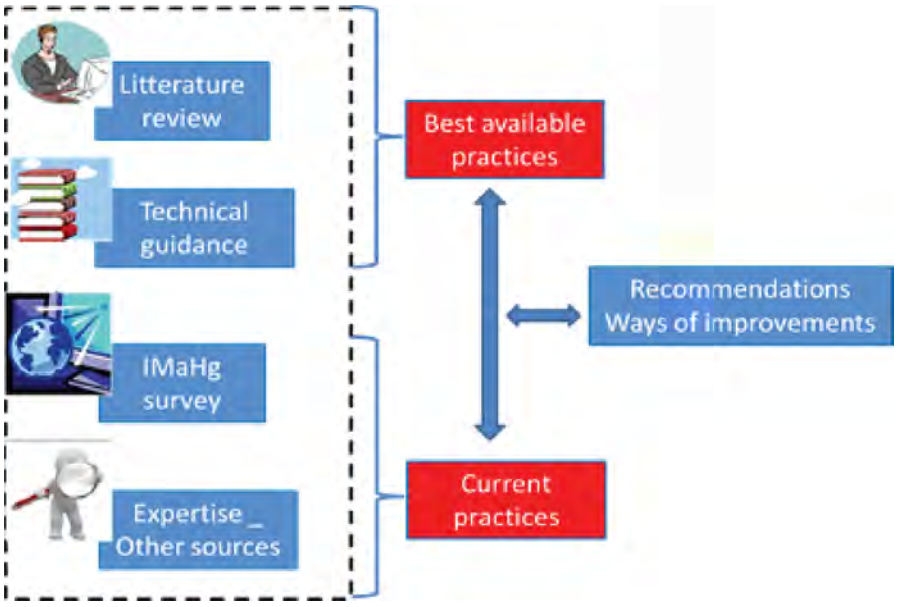
Funders

Start	End	Duration (months)	Total Funding (k€)	Dissemination cost (k€)
October 2011	February 2014	29	287	34,6

Aims of the project

- Improving the understanding of mercury speciation (chemical forms) and partition (physical forms) in the vadose zone, by
  - Compiling physical, chemical and thermodynamic constants of mercury forms
  - Checking mercury geochemical modelling capabilities
- Give recommendations for characterisation, assessment and remediation of mercury contamination in the vadose zone
- Identification of research needs

Mean-Methodology



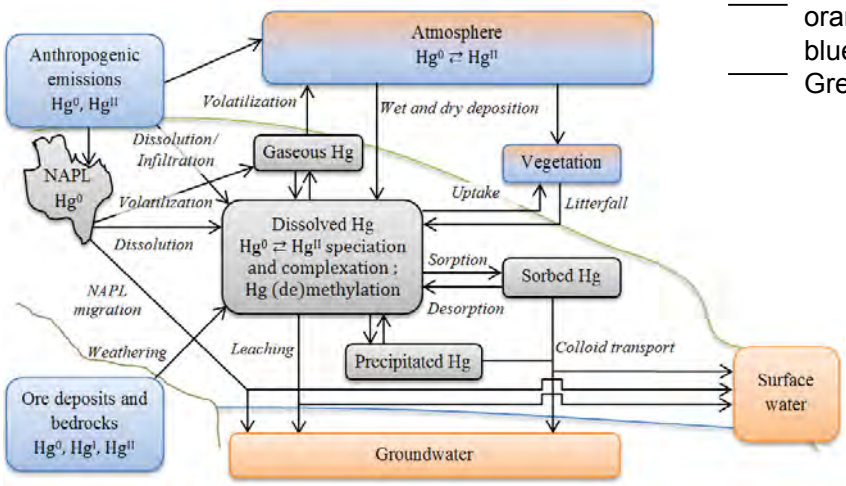
Means: litterature review ; european wide consultation ; partners experience

Mercury fate and transport

Objective: Knowledge about mercury fate and transport

Focus :

- Vadose zone and anthropogenic soil
- Aqueous species and solid species
- Phases transition: dissolution, sorption, volatilisation



orange : sink
blue : source
Grey phases in soils

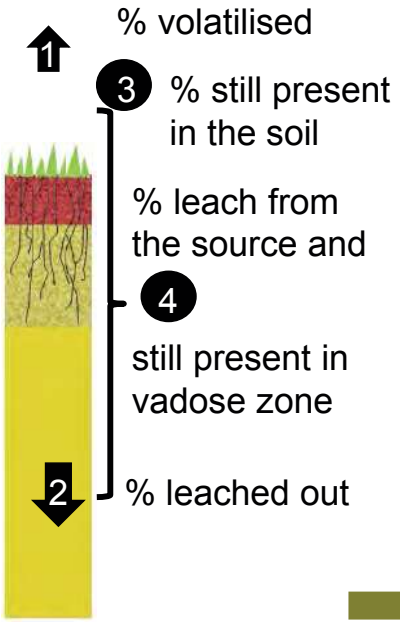
D2-1 Mercury fate and transport in soils

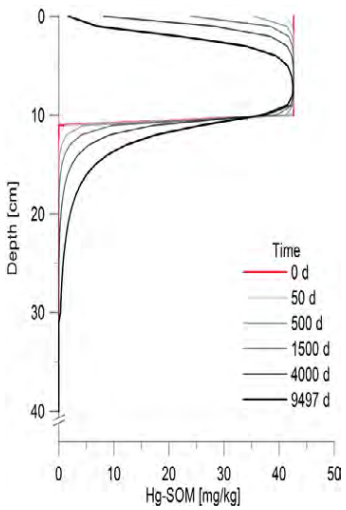
Modeling

Objective: Modelling of Hg mobility in vadose zone

Focus :

- Vadose zone and anthropogenic soil





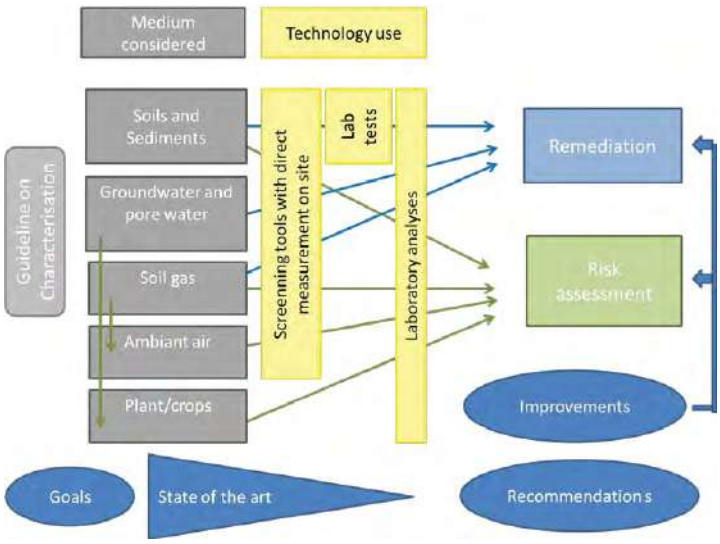
D2-2 Numerical tool for simulating mercury fate and transport in soils

Characterisation

Objective: Review of available mercury characterisation practices and ways of improvement

Focus:

- Evaluation of existing methods for all the forms of mercury, for all media



D 3.1 Best available practices in mercury characterisation and recommendations

Risk assessement

Objective: determine practices used for mercury risk assessment and propose improvement

Focus:

- on assessment models for soil, guideline values and the assumptions behind the values.
- on strategy that can be used to optimize RA, i.e. is support in focusing on aspects that makes a significant difference in RA.

	Hg in:	Common practice	Improvement options	Best Practice	Potential effect on risk estimate/guideline value when chosing Best Practice	Comment
Concentration in organs	Humans	Not commonly considered	Blood test, hair test Hg-species specific modeling.	-	-	Not commonly relevant in contaminated land investigations. Relevant only if assessing current exposure situation.
Intake and uptake		100% Hg uptake/bioavailability is generally assumed	Determining the water-soluble and exchange-able Hg fraction. *In Vitro* bioavailability test. *In Vivo* bioavailability test.	*In-Vitro* bio availability tests	Intermerdiate/high	Literarture reports 2-38 % available fraction. Risk would be reduced by approx 2-50 times resulting in a guideline value at a maximum 50*GV(100%). At the moment no in vitro oral bioavailability test has been validated for Hg and no environmental agency has included it in its recommendations.
Concentration in soil	Vadose zone	Measurement of total Hg in soil or of inorganic and organic mercury	Measure Organic Hg, inorganic Hg	Measure Organic Hg & inorganic Hg-conc	Intermediate/High	Uptake of inorganic Hg less than of organic Hg

➡ D 3.2 Best available practices in mercury risk assessment and recommendations

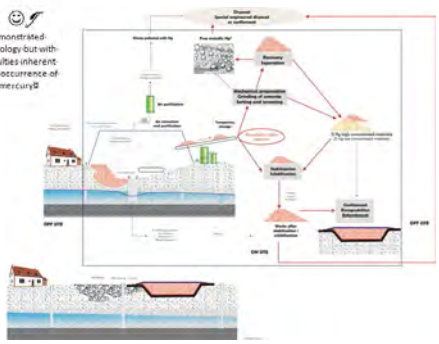
Remediation

Objective: Current state of mercury remediation practices, recommendations and perspectives

Focus:

- Important parameters for remediation plan selection
- State of the Art of available remediation technologies for contaminated sub-surface making the distinction between proven and emerging technologies.

Technology	Principle	Key-advantages	Key-disadvantages	Targeted-mercury	Status
Source-removal-with-excavation	Excavation of the polluted materials on the whole contaminated areas	Provide total remedy, radical with no residual concentrations to manage	Could be expensive due to health and safety constraints for workers and surrounding. Risk of remobilization of labile elemental mercury. Treatment of material required Geotechnical limitation due to groundwater level and/or existing infra-structures	Total labile mercury	demonstrated technology but with difficulties inherent to the occurrence of mercury
Hot-spot-removal-with-excavation	Excavation of the polluted materials on the hot spots where the mercury masses are concentrated	Provide total remedy on hot spots, radical with no residual concentrations to manage in hot spots	Could be expensive due to health and safety constraints for workers and surrounding. Risk of remobilization of labile elemental mercury. Management with other technologies of residual non-excavated soils. Treatment of material required Geotechnical limitation due to groundwater level and/or existing infra-structures	Total labile mercury	demonstrated technology but with difficulties inherent to the occurrence of mercury



➡ D 4.1 Best available practices in mercury management and recommendations

Dissemination

- Project description was posted: on web site of all partners, eugris and snowman,
- Participation to the NICOLE Hg Working Group, and to NICOLE technical day on Hg 2012, Mercury Conference in Edinburgh 2013, ICCL meeting 2017
- Participation to congres: Aquaconsoil (2013), Goldschmidt (2013)
- Article: 1 scientific rewiew, technical article (UK)
- Result used for trainees in SE
- Final Workshop: On–line conference connecting national hotspots
- Deliverables will be sent to all IMaHg survey and final workshop participants (more than 100 people)
- Documents produced cited for guideline / Minamata convention

Snowman network : lessons from past for future collaborative funding

Added value of transnational research funding

- Adaptation of the problem to several countries issues
- Share of project's cost
- Possibility to work with high specialists (not always present in each country)
- Dissemination of the results to a wider audience due to redaction in English of the deliverables

Critical challenges in planning/applying a SNOWMAN project

- Not different from National project

Snowman network : lessons from past for future collaborative funding

Elements to keep

- An unique desk for launching
- Financial reporting and contractualisation in its own language
- Only one PO to follow the project

Suggestions for improvements

- Increase the number of Funders 5-6 max
- Reduced as much as possible the reporting part and also the useless intermediate reports
- Choose the right deliverables to be produced regarding the audience : to be defined at an early stage

Thank you for your attention

World Soil Day

European Commission

ECOSOM project

A. Revallier

Inspiration

Are organic matter applications and reduced tillage relevant levers for sustainable farming ?

Results from ECOSOM project

(1/10/2011-31/12/2014)

S. Houot, L. Vieublé, F. Obriot, L. Lundin, A. Hartmann, J. Faber, A. Revallier

World Soil Day December 2017

VEOLIA ALTERRA WAGENINGEN UR INRA SCIENCE & IMPACT AgroParisTech UMEÅ UNIVERSITET formas ADEME Agence de l'Environnement et de la Maîtrise de l'Energie SNOWMAN NETWORK Knowledge for sustainable soils QualiAgro

Aims of ECOSOM:

Key role of soil organic matter and biodiversity in sustainable farming

x

?

?

Properties/Functions

- Organisms Activities
- Dynamic of elements (nutrients, contaminants)
- Porosity Soil structure
- GHG emission
- Carbon storage
- Water Dynamics

Services/ Dysservices

Provisioning

Regulation

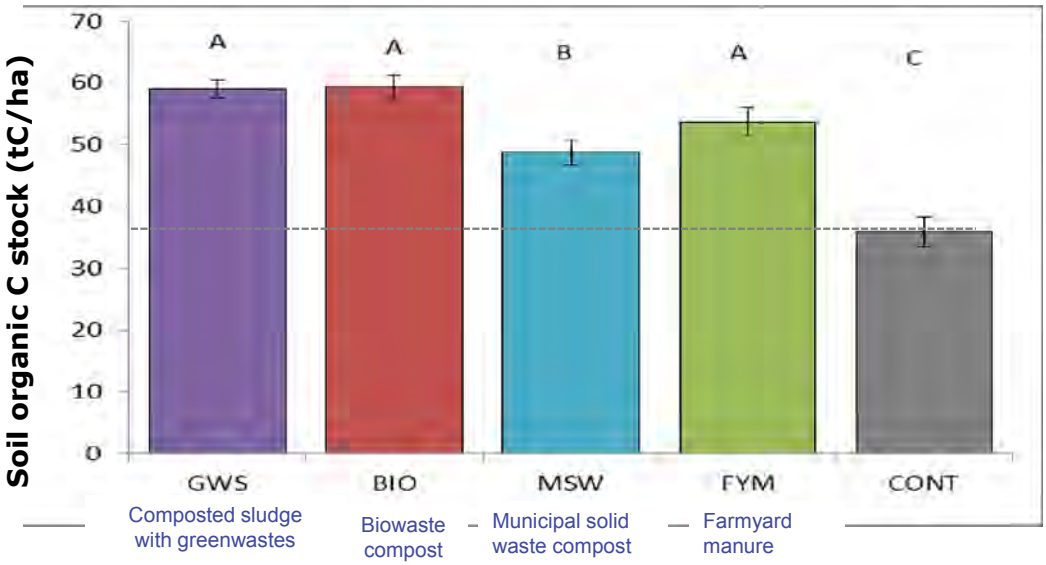
- Functional biodiversity
- Water regulation
- Climate Regulation
- Physical support
- Water quality
- Yield
- Fertiliser Substitution
- Erosion
- Contaminations – *Chemical - Biological (pathogenous)*

Trade-off

Guidance for farmers and stakeholders

Organic Waste Products and **C organic stocks** in soil

Soil organic C stocks after 15 years (7 composts and manure applications)



SOERE-PRO

QualiAgro

Qualiagro

4 tC/ha

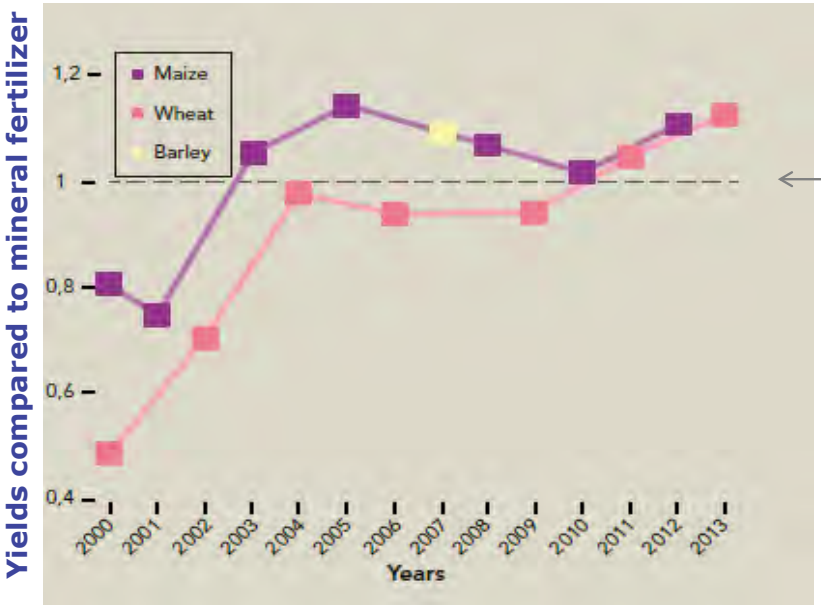
➔ OWP : Increase of Soil organic carbon stock

➔ Increase of 3 to 4 % per year of Soil organic Carbon

➔ High increase is related to the stability of OWP

Organic Waste Products and **crop yield**

Relative yield in the amended treatments (composted sludge GWS) compared to mineral N treatment

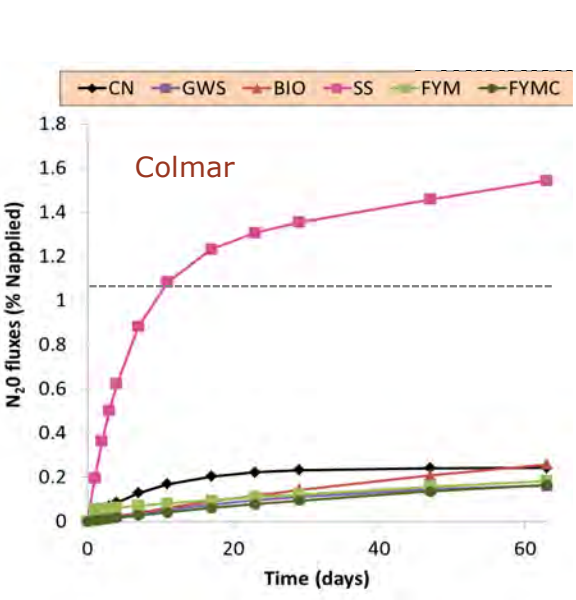


➔ Two phases :
- Progressively increase of yield ; reach the yield from mineral
- after 3-4 yrs : more stable

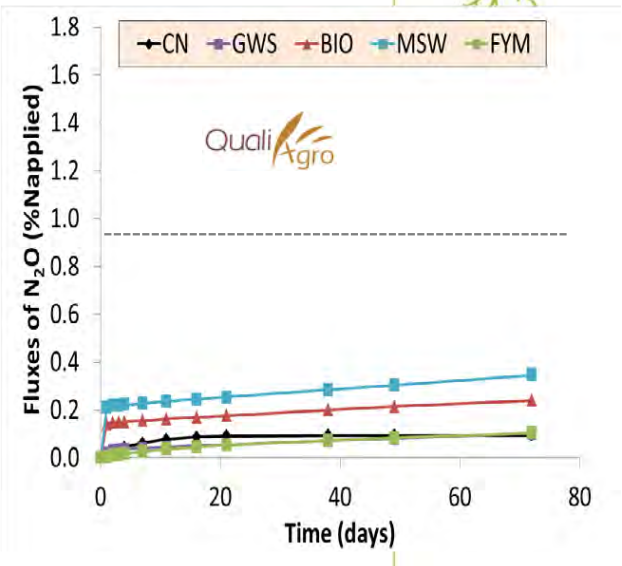
➔ Different response depending on the crop

Potential trade-off of Organic Waste Products: GHG emission

Dynamic of N20 flux (% N applied) just after OWP application

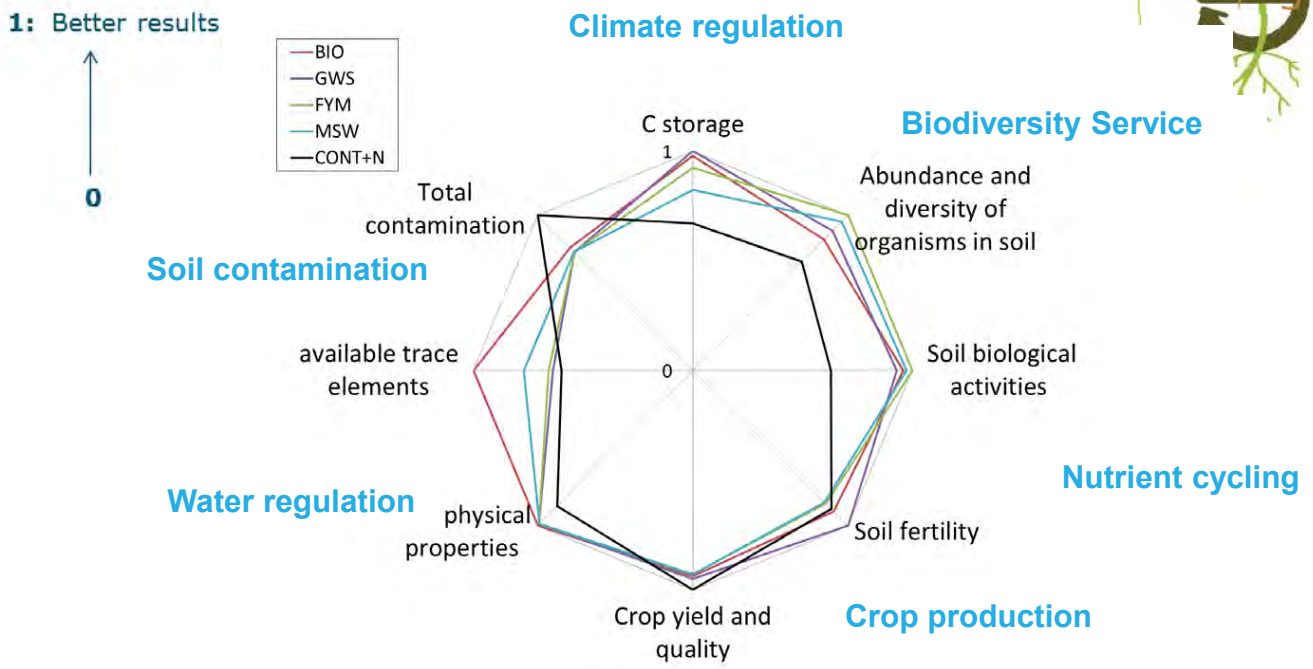


Emission factor IPCC: 1% N



➔ compared to mineral, no significant N2O production from WOP
➔ composts and farmyard manure, mineral N: low N2O fluxes (EF<0,3%)
➔ sludge: High N2O (EF> 1,5%)

Soil quality index for Organic Waste Products application - Agregated approach



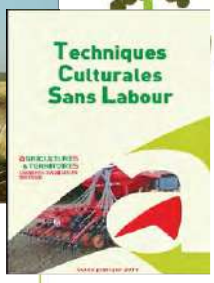
→ All OWP improved QI compared to mineral N, except "total contamination"
→ The **BIOwaste** compost presented the best scores
→ Need to be tested in other situations

Dissemination

Field actions

Brochures

English and French versions



Join meeting

Advices

Films are available on websites :

https://ecobiosoil.univ-rennes1.fr/snowman-sustain/news.php

Feedback from a SNOWMAN funded project

Added value

Enable to compare different approachs between countries for a same scientific question (soil organic matter for ECOSOM project)

Vary environmental and regulatory context and stakeholders

Exchanges between ECOSOM and SUSTAIN:

- Complementary approachs
- Join meetings with the two projects were interesting (human and scientific)
- Enable to get larger results to discuss and present together (final join meeting and brochures)

Feedback from a SNOWMAN funded project

Critical challenges

Not enough exchanges between partners

Lake of interactions with stakeholders from other countries. Difficulty to disseminate to ALL stakeholders (differents in the different country) in an adapted and specific way to each of them.

Lake of information on « less formal » dissemination in other countries

Feedback from a SNOWMAN funded project

Elements to keep

Budget and strong encouragement for dissemination!

Relative simplicity of functionning

Lauching new projects and presenting the previous funded ones at the same meetings => give a nice up-to-date map of the research on soil topics closed to us

Good involvement of funders at milestones meetings

Feedback from a SNOWMAN funded project

Suggestions for improvements

More exchanges with ALL stakeholders (more dedicated budget for this?)

IBRACS

Dan Berggren Kleja, Swedish Geotechnical Institute

SNOWMAN NETWORK
Knowledge for sustainable soils

IBRACS

Integrating Bioavailability in Risk Assessment of Contaminated Soils: opportunities and feasibilities

***Period**: Oct 2011-Sep 2014; **Total founding**: € 654 236*
***National founders**: Formas & SGI (Sweden), ADEME & INRA (France), OVAM (Flanders), DGARNE (Wallonia)*

Dan Berggren Kleja (coordinator), Swedish Geotechnical Institute (SGI)

Jurate Kumpiene, Luleå University of Technology (LTU)

Gerard Cornelissen, Stockholm University (SU) / (NGI on subcontract)

Erik Smolders, Katholieke Universiteit Leuven (KUL)

Philippe Sonnet, Université Catholique de Louvain (UCL)

Thibault Sterkeman, Institut National de la Recherche Agronomique (INRA), Université de Lorraine

Aims IBRACS

- **The overall aim of IBRACS** was to provide policymakers, authorities and service providers with **guidelines on how chemical bioavailability tests** can be used in site specific risk assessments.

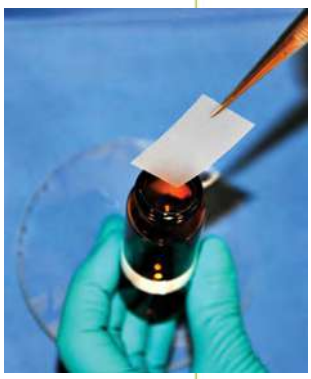
Why account for bioavailability?

- To **improve accuracy** in risk assessments giving more reliable decisions on how much soil that needs to be remediated.
- To open up for management options based on **immobilization** of contaminants (reducing bioavailability).
- More **cost effective** site management.

Major deliverables

A complete framework for ecological risk asssment of PAHs based on porewater concentrations

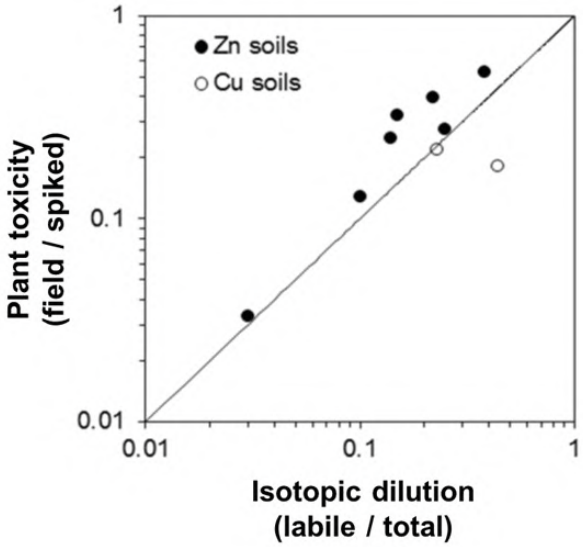
- Porewater concentrations are determined using a passive sampler method (polyoxyethylene membrane, POM)[a,b]
- Scaling of toxic response is made using ecotoxicity data compiled by RIVM[c]
- An Excel-based tool developed by the IBRACS team is freely available at http://projects.swedgeo.se/ibracs/



a) Hawthorne et al. 2011, Anal. Chem. 83, 6754-6761
b) Arp et al. 2014, Environ. Sci. Technol. 48, 11187−11195
c) Verbruggen 2012. RIVM Report 607711007/2012

A development of the ecological risk assessment tool for metals – the SOIL PNEC calculator

- The SOIL PNEC calculator accounts for bioavailability by 1) soil property correction functions, and by 2) metal specific leaching-ageing factors
- We showed that site-specific leaching-ageing factors can be determined using an isotopic dilution method[a]



a) Hamels et al. 2014. Environ. Toxicol. Chem. 33, 2479-2487.

The SOIL PNEC calculator can be downloaded free of charge

ARCHE
ASSESSING RISKS OF CHEMICALS

Input sheet for automatic calculation of multiple site specific

Instructions:
1. The sheet 'Input' must be empty for use of the 'Multiple input' calculations
2. Select metal from list: Zinc
3. Use for each sample or observation a new line for columns A to G
4. For each sample, a value must entered in column A in order to ensure proper calculation
5. The necessary input parameters for site specific Zinc PNEC calculations are:
   metal background (mg/kg dwt), effective CEC (cmolc/kg dwt) and pH
   If no value is entered for effective CEC, it will be predicted automatically from pH, % OM and % Clay
6. press 'Calculate'
7. press 'Reset' before starting new calculations (this will delete all previous input and output)

Calculate Reset

	INPUT							OUTPUT							
								Total approach				Added approach			
Sample Id	PEC total mg/kg dwt	Metal background mg/kg dwt	effective CEC cmolc/kg dwt	soil pH	Organic carbon %	Clay %		PNEC mg/kg dwt	PEC mg/kg dwt	RCR	PAF %	PNEC mg/kg dwt	PEC mg/kg dwt	RCR	PAF %
1	6100	220	9	6.7	2			121.7	6100	50.14	93.8	104.4	5880	56.30	94.2
2	35800	450	5	7.1	1			60.2	35800	594.55	98.7	53.8	35350	656.64	98.9
3	20000	780	17	6.1	5			174.7	20000	114.46	95.2	150.4	19220	127.83	95.6
4	18000	75	11	6.6	5			153.3	18000	117.39	100.0	126.5	17925	141.74	100.0
5	6700	80	9	5.8	5			111.9	6700	59.86	99.0	92.3	6620	71.72	98.9
6	36700	260	39	6.2	23			436.1	36700	84.16	99.9	352.1	36440	103.49	99.9
7	290	6	1	5.3	1			14.0	290	20.70	87.9	11.6	284	24.48	87.9

http://www.arche-consulting.be/metal-csa-toolbox/soil-pnec-calculator/

Dissemination and communication

Published papers (≥6)

- Arp, H. P. H., S. Lundstedt, S. Josefsson, G. Cornelissen, A. Enell, A.-S. Allard and D. B. Kleja. 2014. "Native Oxy-PAHs, N-PACs, and PAHs in Historically Contaminated Soils from Sweden, Belgium, and France: Their Soil-Porewater Partitioning Behavior, Bioaccumulation in Enchytraeus crypticus, and Bioavailability." Environmental Science & Technology 48, 11187−11195.
- Hamels F., J. Malevé, P. Sonnet, D. Berggren Kleja and E. Smolders 2014. “Phytotoxicity of trace metals in spiked and field-contaminated soils: linking soil-extractable metals with toxicity.” Environmental Toxicology and Chemistry 33, 2479-2487.
- Dupuy, J., S. Ouvrard, P. Leglize and T. Sterckeman. 2015. Morphological and physiological responses of maize (*Zea mays*) exposed to sand contaminated with phenanthrene. Chemosphere 124, 110-115.
- Josefsson, S., H. P. H. Arp, D. Berggren Kleja, A. Enell and S. Lundstedt. 2015. "Determination of POM-water partition coefficients for oxy-PAHs and PAHs." Chemosphere 119, 1268–1274.
- Enell, A., Lundstedt, S., Arp, H.P.H., Josefsson, S., Cornelissen, G., Wik, O. & Kleja, D.B. 2016. Combining Leaching and Passive Sampling To Measure the Mobility and Distribution between Porewater, DOC, and Colloids of Native Oxy-PAHs, N-PACs, and PAHs in Historically Contaminated Soil. Environmental Science & Technology 50, 11797−11805.
- Dupuy, J., Leglize, P., Vincent, Q., Zelko, I., Ouvrard, S. and Sterckeman, T. 2016. Effect and localization of phenanthrene in maize roots. Chemosphere 149, 130-136.

Seminars, workshops and conferences

- Co-organizer of national workshop on ecological risk assessment in Visby, Sweden, October 2014 (two IBRACS presentations)
- National meetings and seminars with stakeholders
- ≥6 oral presentations and ≥6 poster presentations at international conferences (AquaConSoil, SETAC, ICOPTE, NORDROCS, etc.)
- A Swedish guidance document on IBRACS methods will be published in early 2018

the Snowman network: lessons from past for future collaborative funding

Added value of transnational research funding

- Provide knowledge and idea transfer between countries. Very stimulating!
- Facilitate harmonization of concepts and perceptions (e.g. guidelines).
- Expand networks for researchers, research funders and policy makers.
- In IBRACS all partners had other parallel research projects which interplayed with the project. This resulted in a lot a added values to the project. A high output of a fairly small budget.

Main recommendations for a future transnational research project call

Keep:

- Number of research groups/countries involved in the SNOWMAN projects were quite optimal (6 groups).
- National funding system worked fine, resulted in less work for project coordinator.
- Kick-off, mid-term and final meetings in Paris during the project period. Appropriate timing and enabled exchange between SNOWMAN projects.

Improve:

- Longer project period (4 years), and larger budgets.

Thank you for your attention

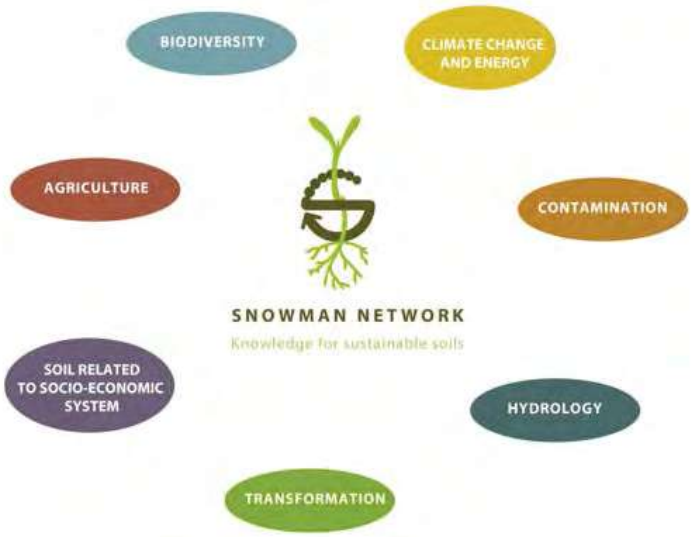
World Soil Day

European Commission

Feedback from researchers on SNOWMAN experiences and expectations for future

Yvonne Ohlsson, Swedish Geotechnical Institute
Frèdèrique Cadiére, ADEME

Inspiration



SNOWMAN NETWORK
Knowledge for sustainable soils

SNOWMAN NETWORK

Feedback from researchers on experiences from SNOWMAN and expectations on future funding

11 respondents/7 projects
Answers in free text

Yvonne Ohlsson, Swedish Geotechnical Institute
Frèdèrique Cadiére, ADEME

Added value of transnational research?

Adds to societal relevance and impact, e.g.:

- Knowledge, information and idea transfer between countries.
- Possibility to identify wich aspects are more general and which aspects are country-specific

Networking

- Provides opportunities also for future research collaborations
- Meeting new people and cultures makes work more attractive. ☺

”Stronger effort towards an EU-wide approach of soil conservation and more harmonsied views on protecting soil as a natural resource.”

Added value of transnational research?

Better, and more, science for the investment, e.g.:

- Complementarity competences and means **enables answering more scientific questions**.
- **Diversity of approaches** and of experimental contexts **reinforce the validation of hypotheses and models**.
- International projects promote **multidisciplinary** research with **exchanges of know-how between countries.**

Gathering more funding sources provides larger platforms & allow for focused and substantial research

Experienced added value of research within SNOWMAN

Also:

- knowledge exchange **between projects** (joint meetings)
- Strong **linked to a practical application**,
- Ensures that the proposed research is focused on **transnational issues**.
- **Extended partnerships/collaborations** facilitated access to e.g. test sites, focus groups (e.g. school children, farmers, industry) etc.
- **results became available more easily** to interest groups in more countries (language issues).

When parallell research projects interplayed with the joint project, a high output for a fairly small budget was gained

Call process (including funding rules)

”Appreciated the rather uncomplicated process”

- Rather straightforward, no transfers needed between countries but funding came directly to each partner. It worked fine with the national funding system.
- Number of research groups/countries involved in projects optimal. Not to big projects, overall not too many participants.
- Project management and coordination not too time consuming.
- Satisfying.
- …

Call process - improvements

- Funding of partners could be quite different – could it be designed to be more equal?
- Longer financing times, four or five years (to include also dissemination). And know in advance the possibilities of time extension.
- More flexibility in able to adapt subcontractors tasks to actual conditions later on in the project
- The contract format (consortium agreement) needs to be improved

Engagement of the funders

The presence of the funders at all milestone meetings and their interactions during on-going work is something to keep.

Funders engagement – some suggested improvements

- Different funders required quite different types of reporting, this could be better aligned.
- Keep the decentralized financial management, which allows the coordinator not to be overloaded with administration
- Maybe the funders could be more active at a national level, if possible?

Dissemination

- The several SNOWMAN **dissemination meetings** appreciated.
  - An **opportunity to expand ones network** and to **get influences and information from other research topics related to soil.**
  - **High expectations** on dissemination from SNOWMAN**,** but **also support** by e.g. providing the **joint meetings opportunities**.

- A **dissemination strategy** a prerequisite to get funding. Workshops, popular science reports, and guideline documents recommended (to keep)
- The strong **recommendations given for the dissemination phase was very helpfull** to keep the target of a large and specific communication of results to stakeholders.

”Certainly **keep everything**!”

Dissemination – suggestions

- Support ”larger” dissemination occasions (meetings, congresses...) & organize international meetings associated with recognized congresses (such as aquaconsoil) , e.g. special sessions.

- Maybe a specific group to address and support implementation issues in the organization.
  - Help the project holders to refine their strategy and identify target groups.
  - Support to disseminate results to the institutions of the European Union
  - Help in logistics for dissemination events

- Balance between time devoted for research and time devoted for outreach and dissemination activities.

Critical challenges?

”Language, Culture etc always a challege but mainly it is positive.”

- To **find a common language** and to (in more depth) understand the **different perspectives** amongst eachother. To know all members well enough (specific skill, way to work...)
- A challenge to fully integrate the research work.
  - Critical not to make the project too big. 5-6 partners optimal.
  - A good communication strategy within the project.

- Limitations in funding & project time
  - best to have ”PhD type funding”
  - Sometime funding for experimental equipment a challenge (for analysis)
  - Took longer than 3 y

How we dealt with challenges

- open attitude and tried to be open with our different perspectives from the start.
- **Listed project risks** early on, **made a plan for how to try to manage those**.
- **Physical meetings important.** Frequent Skype and telephone meetings also needed.
- Meetings **also provide an opportunity to talk about potential future research collaborations**.
- A good project structure and **communication strategy**.
- Resolute by working free of charge.

How to get the best value out of time and money invested?

- Minimum administration
  - align reporting requirements between funders
  - two-step application system,
- **Keep or increase budget for & focus on dissemination**:
  - Well organised dissemination meetings, discussions in groups not only presentations, Make sure the technique works!
- Ensure that **PhD funding is possible**
- Focused projects with limited scopes

Even smaller sums provided from each country can result in great achievements altogether. The investments probably result in more research than just the funded ones, i.e. follow-up applications and Projects.

Additional comments

- There is a **pronounced continued need for European funding** on sustainable soil and land management. Even if soil research to some extent is included in other challenges, it also needs to be addressed "by itself"

- SNOWMAN has been a rather small funder, still with a lot of research results for the invested money.

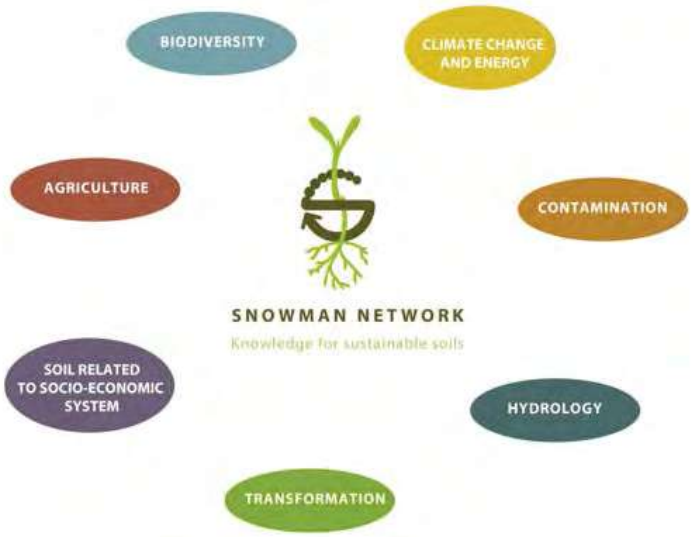
- Such network is very welcomed!
- Please, go for another SNOWMAN (or similar) call!

Lessons on organization of collaborative funding

Joint Closing Session

Lessons on organisation of collaborative funding

Isabelle Feix, ADEME



SNOWMAN NETWORK

Knowledge for sustainable soils

SNOWMAN NETWORK

Lessons on organisation of collaborative funding, and invitation to match-making with SNOWMAN for tomorrow

Isabelle FEIX, ADEME (FR), chair of SNOWMAN network

Outline

1. **Feedback from researchers**
2. **New network potential**
3. **Topics to investigate**
4. **Letter of interest & further match-making invitation**

1. Feedback from researchers

- Results of the discussion just before

    1. *Added value of transnational research funding*

    2. *Critical challenges in planning / applying for or carrying out to SNOWMAN funded project?*

    3. *Main recommendations for a future transnational research project calls for research:*

        ** to keep*

        ** suggestions*

2. New network potential

(see briefing note)

A European network for soil research funders

Forming a sustainable platform of European research funders and administrations that aims to bridge the gap between knowledge demand and supply in the field of sustainable soil management

Why?

There are challenges to face:

- Soils are a stategic issue for humans and ecosystems, soil threats are still going on.
- There is no coordinated research at an European level, soil thematic research is split in different research programmes
- Need for a strong soil research agenda coordinated at EU level and with a higher visibility

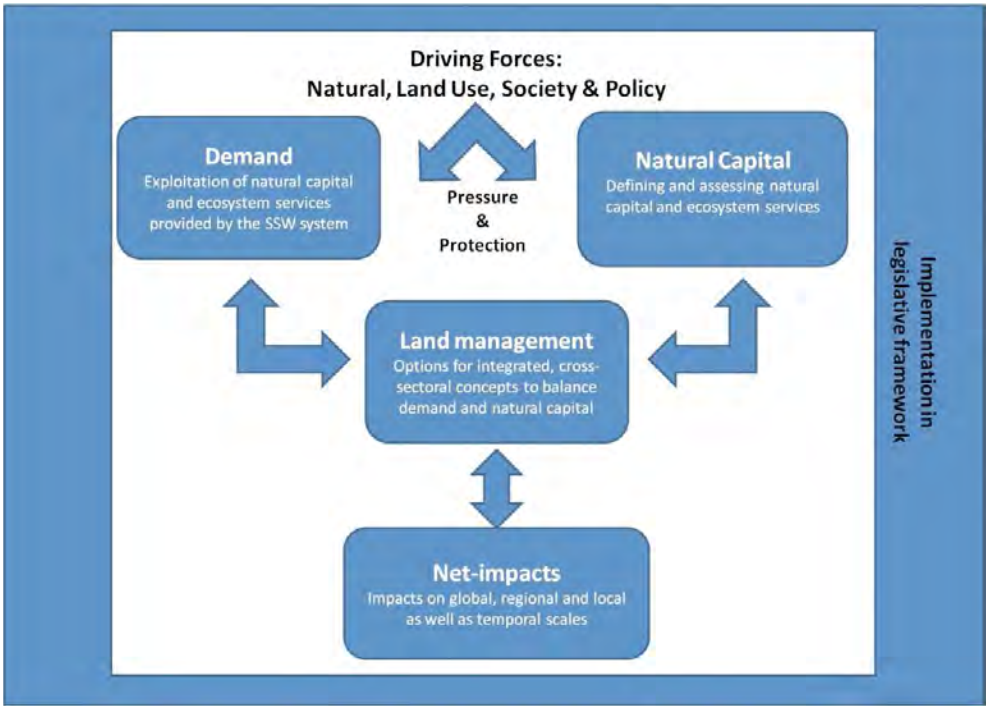
2. New network potential

What to gain?

- New knowledge, methodology, decision support tools for a sustainable soil and land management
- Applied research, oriented on end-users‘ needs, including dissemination and science-policy interface
- Joint funding increase return on investment by sharing all results among all committed funders, with a flexible call procedure
- Complementarity of competences, diversity of approaches enables to answer more scientific questions and avoid redundant research project in several countries.

3. Topics to investigate

- Topics interesting SNOWMAN so far



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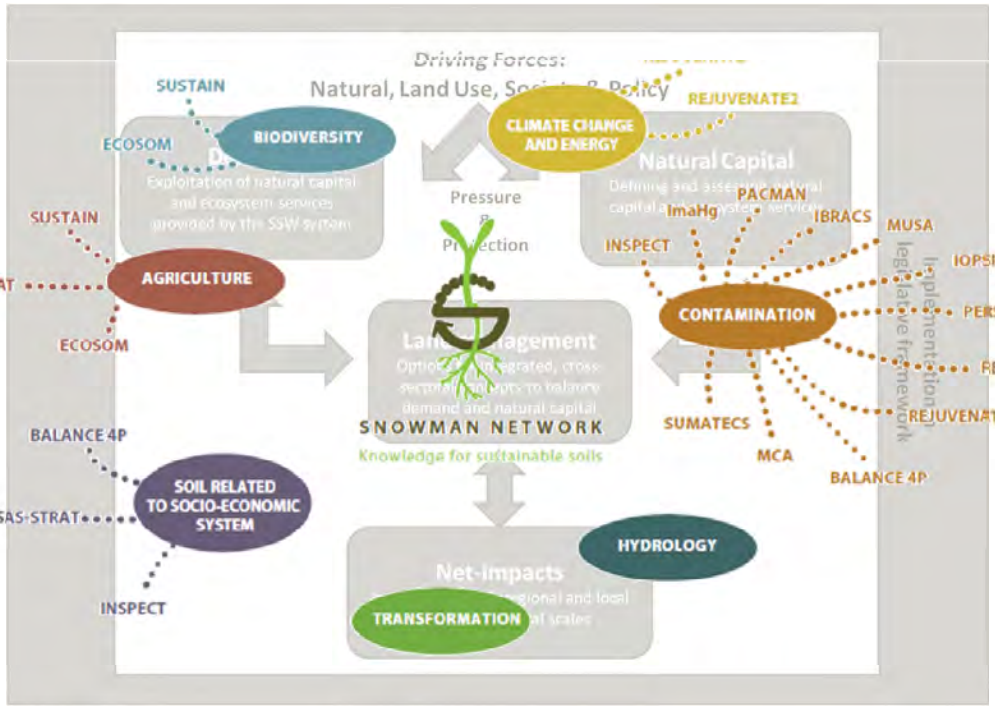
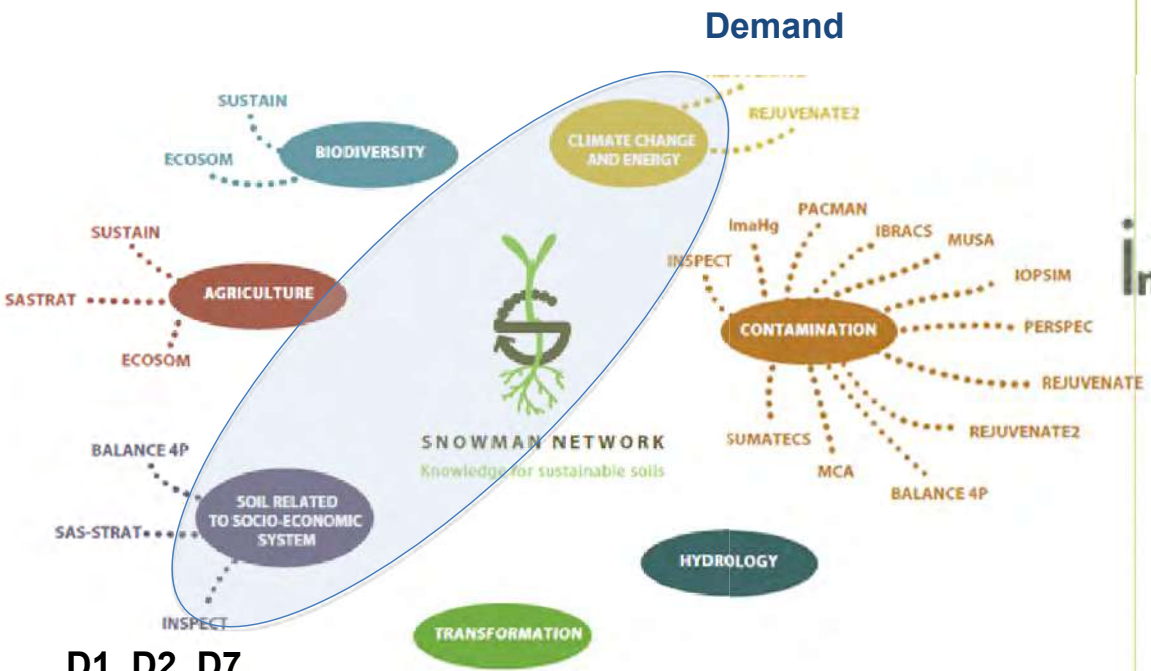


IRT1 to 4, IRT8 to 9, IRT11, IRT14 to 17

3. Topics to investigate

- Topics interesting SNOWMAN so far

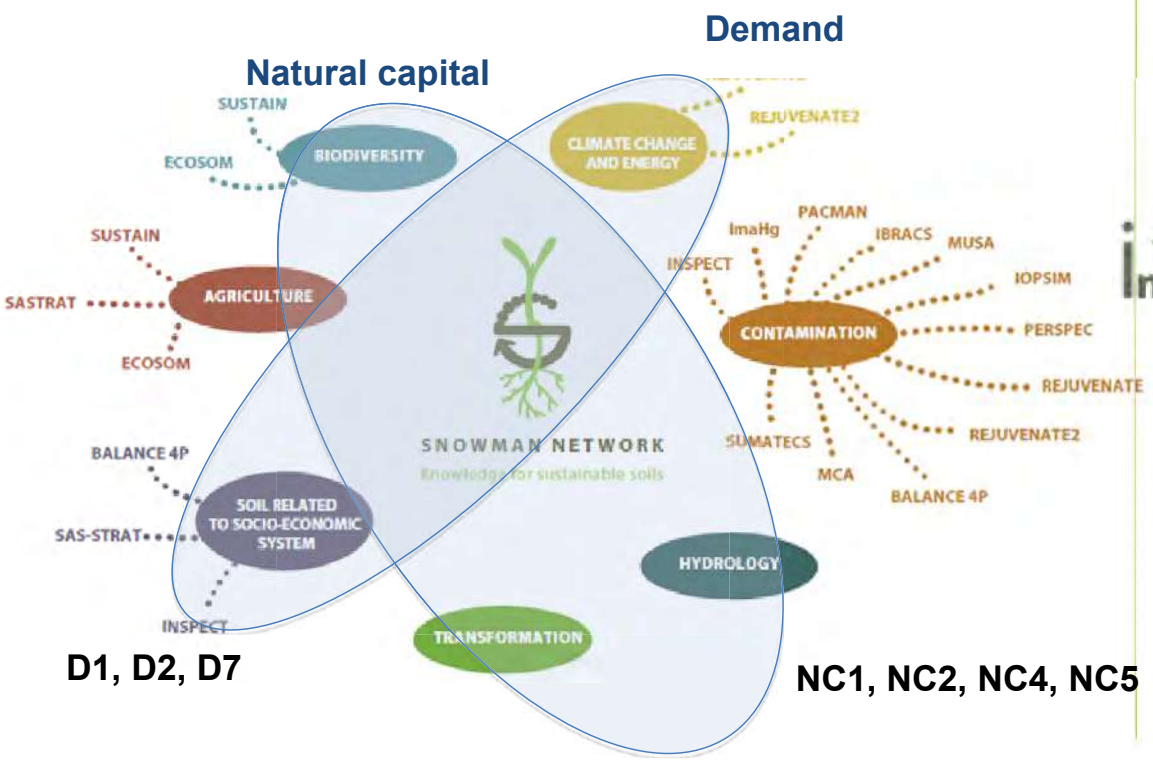


D1, D2, D7

IRT1 to 4, IRT8 to 9, IRT11, IRT14 to 17

3. Topics to investigate

- Topics interesting SNOWMAN so far



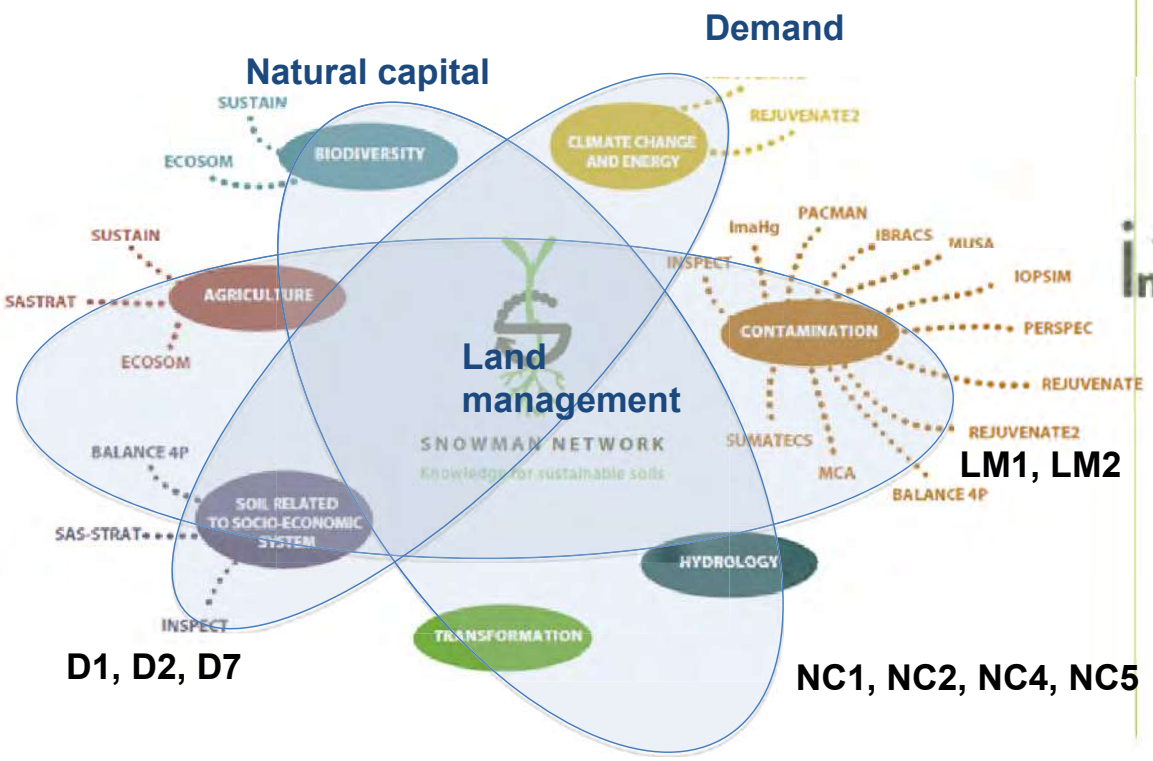
D1, D2, D7

NC1, NC2, NC4, NC5

IRT1 to 4, IRT8 to 9, IRT11, IRT14 to 17

3. Topics to investigate

- Topics interesting SNOWMAN so far



LM1, LM2

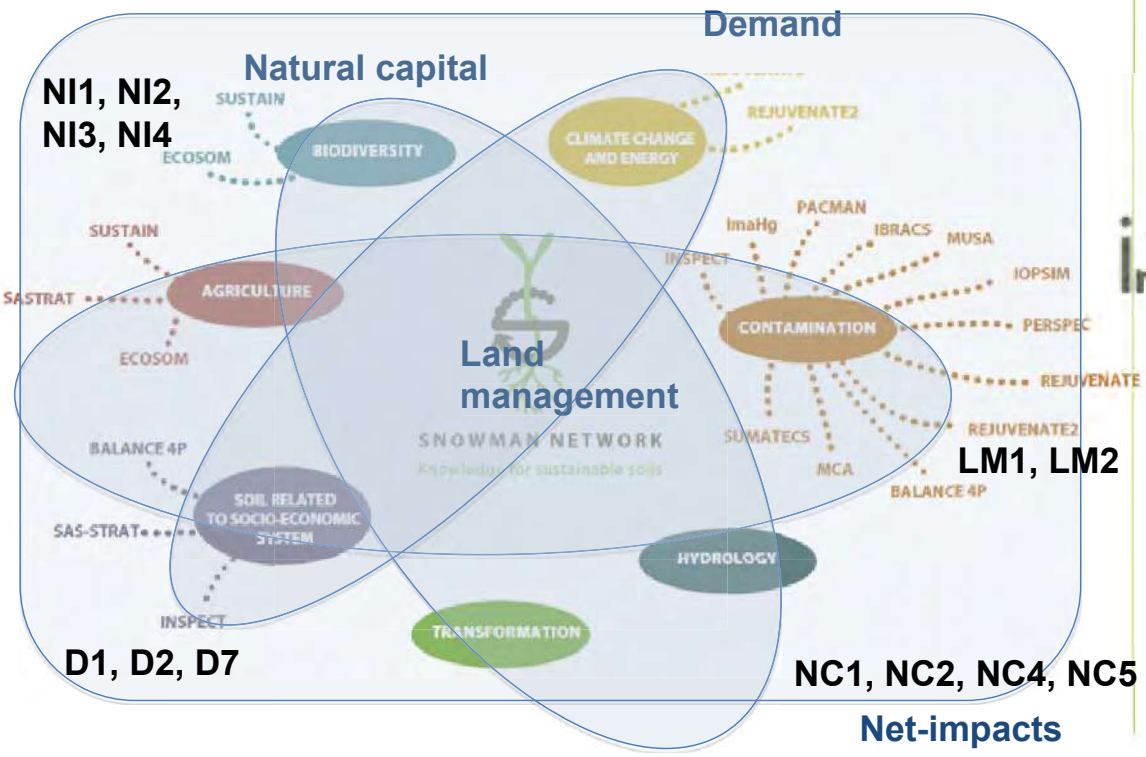
D1, D2, D7

NC1, NC2, NC4, NC5

IRT1 to 4, IRT8 to 9, IRT11, IRT14 to 17

3. Topics to investigate

- Topics interesting SNOWMAN so far



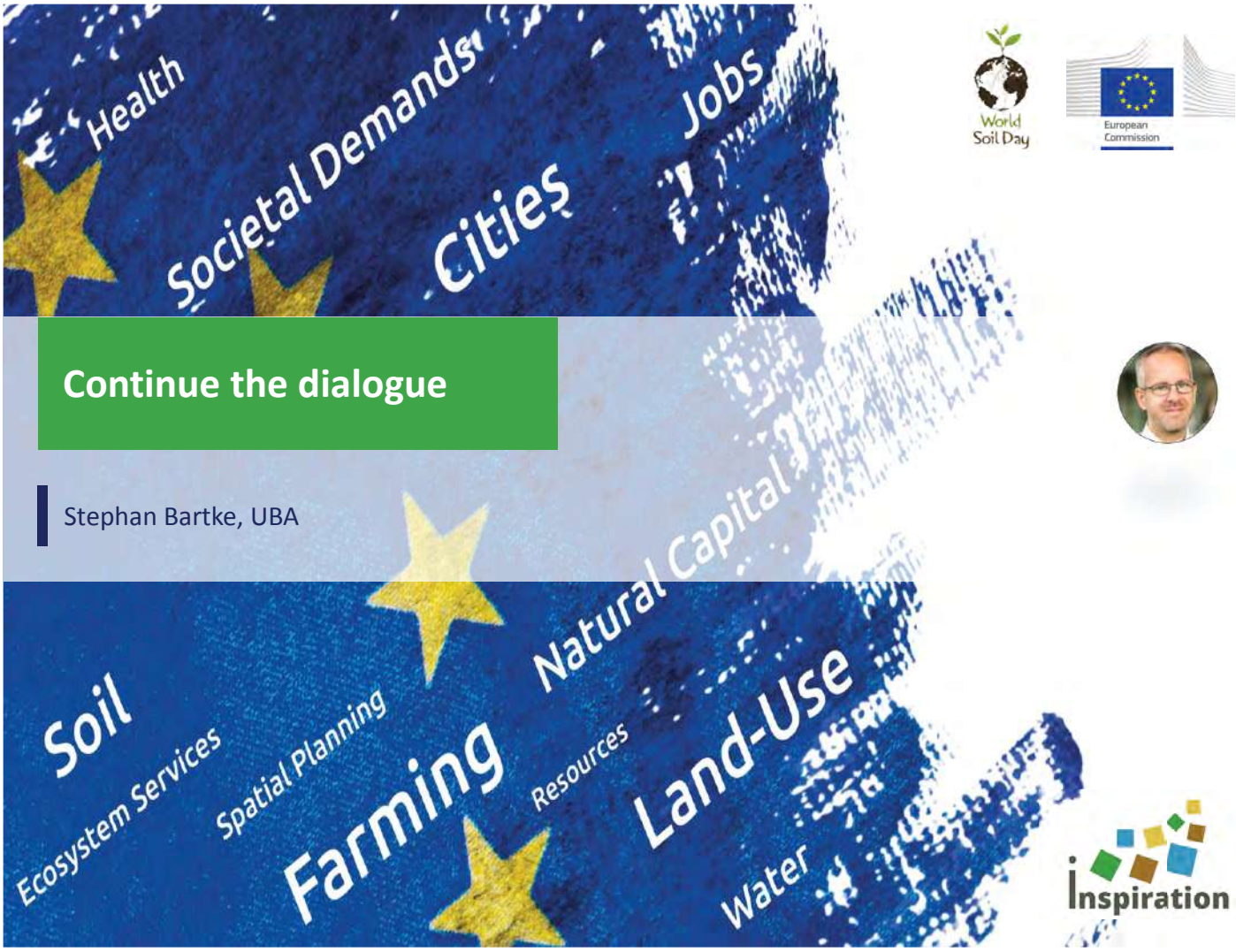
IRT1 to 4, IRT8 to 9, IRT11, IRT14 to 17

4. Letter of interest & further match-making invitation

- Letter of interest to join a EU network of soil and land research funders based on INSPIRATION SRA

  Send it back to your INSPIRATION NCP or to info@snowmannetwork.com

Join us in discussions tomorrow at 8:30 at th entry of the auditorium for match-making!



Continue the dialogue

Stephan Bartke, UBA

Continue the dialogue

INSPIRATION-SNOWMAN	8:30 – 9:30: Room Terra	Determine next steps		
Funders' Lounge	Meet INSPIRATION contacts	Info about the SRA	Register your funding interests	Announce and join discussions
Continued dialogue	Breaks	Poster sessions	Networking	Reception
Open Space				

Continue the dialogue

Open Space

- Recommended method when situation is complex, high degree of diversity, for speedy decisions, no preassigned outcomes
- Self-organizing individual and collective activity
- **We set frame → You set the time and place to discuss your topic**
- Use flexibility and take responsibility for what you care about
- **Open Space = Marketplace of ideas**, inquiry, reflection and learning
- Builds commitment and shared leadership – Participants accept responsibility for what does or doesn't happen
- Action plans and next steps emerge from discussions as appropriate

Inspiration

Open Space: 1 law and 4 principles

The **Law of Two Feet**: Take responsibility for what you care about! Use your own two feet to move to whatever place you can best contribute and/or learn.

Whoever comes is the right people	Whatever happens is the only thing that could've	When it starts is the right time	When it's over, it's over
• Whoever is attracted to the same conversation are the people who can contribute most to that conversation—because they care.	• Expectations are critical. Focus on the present time and place and not get bogged down in what could've or should've happened.	• The creative spirit has its own time, and our task is to make our best contribution and enter the flow of creativity when it starts.	• Creativity has its own rhythm. So do groups. When you think it is over, ask: Is it over? If it's not, make plans for continuing for conversation.

Inspiration

Open Space: Your choices!

	Terra = Lounge	Silva I	Silva II	Silva III	Aqua	Poster
10:15		Topic A *Contact* Bartke, UBA G Finka, SK Government				Topic D *Contact*
10:45			Topic B *Contact* Bartke, UBA Germany		Topic C *Contact* Finka, SK Government	
11:15						

See you tomorrow for World Soil Day

08:30: SNOWMAN – INSPIRATION Match-Making Room Terra
10:00: Opening session Auditorium

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