

INSPIRATION STRATEGIC RESEARCH AGENDA: TOPICS & MATCH-MAKING OF FUNDERS

Paul Nathanail (University of Nottingham)

Co-Authors from INSPIRATION consortium

Why Motivation and problem statement

Growing a low carbon, resource efficient economy with a sustainable supply of raw materials requires research, innovation and dissemination of good practices across Europe and beyond. Cross-European networking is needed to facilitate dialogue among relevant funding bodies, research organisations and end user communities. Such dialogue can encourage R&I and improve coordination of EU and national funding activities while fostering synergies with international research and innovation programmes.

What Approach, results; keymessages

A transition in Soil Policy is needed, but such a transition needs new knowledge. INSPIRATION developed a bottom up approach to identifying the new knowledge needed. Workshops and interviews in over 17 countries across Europe reported over 2000 needs that were distilled into 22 research topics across four themes and an additional 17 integrating research needs, culminating in improving preparedness for changing climate conditions and amplified related hazards.

Such research and innovation requires funding beyond that available from national or even EU budgets – a variety of co-funding is essential. No one funding model will suit every organisation or activity. Models identified including International funding, Bilateral funding, EU initiatives (including frameworks, ERANets, COST, ERANets, JPI, Article 185), National Research foundations/ councils, Public/ Private co-financing (eg Innovate UK), Third sector and finally Crowd funding.

A series of online and face to face events has helped funders from across Europe meet and share their priorities and appetites for co-funding. This match making will continue beyond the end of the funding for the H2020 INSPIRATION project.

Key Conclusions; take home message

Funders are invited to review the research needs in the INSPIRATION SRA and identify those that meet their funding priorities and that lend themselves to collaborative funding. INSPIRATION National Contact Person are on hand to help identify other funding bodies with shared interests in co-funding specific activities.

More Further reading recommendations

Website: www.inspiration-h2020.eu and www.inspiration-agenda.eu

Twitter: @inspiration4eu



The INSPIRATION SRA – Topics and match-making

Paul Nathanail, University of Nottingham



Umwelt
Bundesamt

Integrated Spatial Planning, land use and
soil management Research ActTION

**Sustainable spatial planning, land use
& soil management -
Closing knowledge gaps by
implementing new research collaborations**



The INSPIRATION Strategic Research Agenda – Topics & match-making of funders

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The University of
Nottingham

UNITED KINGDOM • CHINA • MALAYSIA

Umwelt
Bundesamt



Societal Challenges #5: Growing a low carbon, resource efficient economy with sustainable raw material supply

Selected SC5 Topics

- 08-2014: Preparing & promoting innovation procurement for soil decontamination
- 09-2014: Consolidating the European Research Area on biodiversity and ecosystem services
- 10a-2014: Enhancing mapping ecosystems and their services
- **10b-2014: Structuring research on soil, land-use and land management in Europe**
- 11a-2014: Mining of small and complex deposits and alternative mining
- 11b-2014: Flexible processing technologies
- 13a-2014: Mineral deposits of public importance
- 13b-2014: Strategic international dialogues and cooperation on raw materials with technologically advanced countries
- 14-2014: Consolidating global knowledge on the green economy in support of sustainable development objectives in Europe and internationally

Objectives of Call SC5-10b-2014

- Better **coordination** of often **fragmented research**
- Innovative ways to **mobilise** all relevant **actors**, **increase policy coherence**, resolve trade-offs, manage conflicting interests, increase participation of citizens in decision-making and improve public awareness and business uptake of research results.
- **Creation of European networks to facilitate dialogue among relevant scientific communities, funding bodies and user communities in Europe**
- Clustering, coordinating and creating synergies between international, European and nationally funded research and innovation actions,
- Developing **joint programmes and projects**,
- Creating links with related international programmes,
- Improve science-policy interface
- Aligning research with decision-making requirements.

SC5-10b-2014: Expected Products and Impacts

- **Network** of funding agencies and other key players in Europe
- Joint vision and a **Strategic Research Agenda (SRA)**
- Evidence-based policy and appropriate, cost-effective management, planning and adaptation decisions
- Enhanced **impact** of research and innovation activities through
 - better identification of R&I priorities,
 - improved coordination of EU and Member State/Associated Country research and innovation programmes and funded activities,
- **Synergies** with international research and innovation programmes.



“Research is not finished until it is written up”... & has made an impact

- Creation of knowledge
- Transfer of knowledge
- Uptake of knowledge
- Demonstration of applicability
- Codification & standardisation

MOST of our research & innovation needs involve two or more of each of these activities

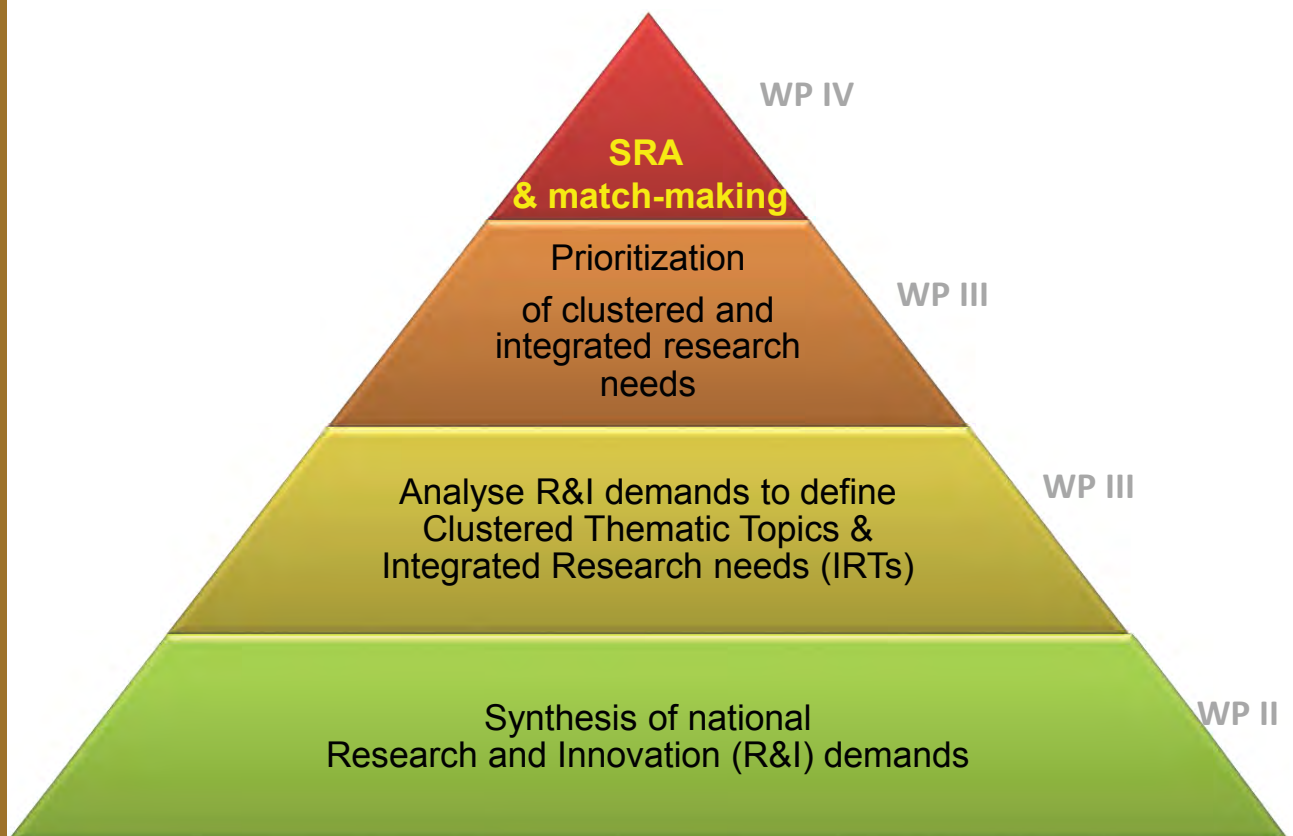
“Transition in Soil Policy needs new Knowledge” Margot de Cleen

- To manage something you must first understand it
- That which you cannot enforce, do not command
- Know your enemy - Know yourself (the enemy within)

So how did we identify
the new knowledge
we need?



Bottom-up inspiration



Integrated Spatial Planning, land use and soil management Research ActiON:

National results: UNITED KINGDOM

Societal challenges and needs

- In the UK, sustainable development has been embedded into decision making for some years, for example by the Welsh consultation and the English's National Planning Policy Framework.
- The key land use challenge is meeting the housing needs of a growing population.
- Concern about long term food security is driving efforts to protect high quality agricultural and water supplies.
- Competing pressures on land use require complex decisions in the face of considerable uncertainty to sustain urban sprawl.
- Landscapes and countryside value experiences are increasingly seen as important for meaningful long term management strategies.
- Public perceptions of soil are mixed and polarised – the residential garden values soil the urban dwellers view it as a potential health hazard.
- Previously developed land, euphemistically referred to as 'brownfield', is being seen by some as an under-exploited resource of land for new housing.

Soil research needs to be included in the SRA

- UK-1 Efficiency of primary production: How does improving supply chain efficiency affect pressure on land use?
- UK-2 Soil and groundwater remediation is difficult to achieve as best to preserve what we already have.
- UK-3 Soil Regeneration – How to increase Soil Organic Matter in poorer soils, and what soil is sustainable, desirable, beneficial?
- UK-4 Natural systems: A better understanding of how natural systems behave and what processes are operating is needed to understand better the effects of different choices of action.
- UK-5 Demand for soil-based resources, imports and exports: Improving sustainability of whole food life cycle of production, transport, consumption and waste to discover the balance between demand, import and export.
- UK-6 Competition between land uses (land-use conflicts): How should land use conflicts be managed?
- UK-7 Targeting outputs: practical, pragmatic, effort needs to be expended in targeting outputs to relevant end-users and in taking the fundamental science through to policy and (improving) regulation.
- UK-8 Competition between land uses (land-use conflicts): The effects of loss of high quality agricultural land to other land uses, e.g. housing, and to development.
- UK-9 Important areas of technical innovation: New techniques to understand soil microclimate in key areas: biodiversity and soil understanding impacts and optimisation of land management.
- UK-10 Landscapes scale variables: Integration to manage landscape soil needs: Precision Agriculture to improve conserve and quality. Catchment-scale management: Managing collaboration of individual farmers.
- UK-11 Assessing the value of primary and secondary production: A high value secondary producer may rely on a relatively low value primary producer, e.g. Scottish Bannock for Scotch Whisky.
- UK-12 Farming practices create valued environments: Uplands and downland: Inland: diversity of soils and their properties depend on how farmers perceive themselves as 'stewards of their environment'.

Republic of Ireland is representative from EPA, Ireland attended the UK workshop

- It (Ireland) Risk Assessment of Contaminated Soils. Research is needed to transfer basic soil and groundwater into an Irish context, e.g. geology, legislation, demographic etc. from the UK and other EU countries.
- It (Ireland) approved of environmental technologies in an Irish setting.

Connecting science, policy and practice

- The UK has a long record of land use research and survey that has informed planning and decision-making.
- A series of instruments (departmental, chief scientist, parliamentary committees, briefing notes for non-specialist) help policy makers and practitioners to go to speed on evidence.
- Relevant uncertainty in environmental science is recognised but can also lead to cynicism.
- Publicly funded research impacts impact.

National and transnational funding schemes

- The UK has a wide range of funding mechanisms to support research into structure, basic & applied research and to transfer research findings into practice.
- Funds can be accessed by researchers and end user applicants and consortia of both.
- Reference to external challenges and projects that will have an impact are prioritised.

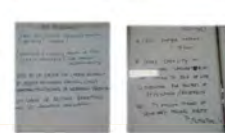
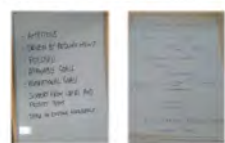
A key message from the UK:

- Land use management is complex, transcends disciplinary boundaries and involves unavoidable inherent epistemic and aleatory uncertainty.
- Integrated assessment at the right spatial and time scale is paramount.



Background of UK Key Stakeholders

- Parliament (House of Commons, government)
- End users (Business, regulators, citizens, not for profit)
- Researchers



National research priorities & capacity reviewed

Each Partner Country identified:

- Societal challenges and needs
- Research needs
- Connecting science, policy & practice
- National and trans national funding schemes
- Key message

UK: Land use management is **complex, transcends disciplinary boundaries** and involves unavoidable inherent epistemic and aleatory **uncertainty**

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Integrating Research Topics (IRTs)

From information to implementation

IRT-1: Integrated Environmental Assessment and Soil Monitoring for Europe

IRT-2: Recognizing the value of ecosystem service in agricultural land use

IRT-3: From indicators to implementation: Integrated tools for a holistic impact and land use assessment

FFFF: demand, potentials and risks

IRT-4: Bio-Economy – unleashing the potentials while sustaining soils

IRT-5: Integrated scenarios for the Soil-Water-Food nexus under societal challenges

IRT-6: Assessing the efficiency of the Soil-Sediment-Water nexus of resources

IRT-7: Maintaining soil fertility by organic farming to attain food security

Challenge: Integrated urban management

IRT-8: Circular land management

IRT-9: Developing effective policies to combat urban sprawl

IRT-10: Facilitating the implementation of urban governance structures through stakeholder participation

IRT-11: Integrated management of soils in urban areas

IRT-12: Environmentally friendly and socially sensitive urban development

IRT-13: Urban Metabolism – Enhance resource efficiency through a closing of urban material loops

Disturbed landscapes

IRT-14: 'Emerging contaminants' in soil and groundwater

IRT-15: Sustainable management and valorization of degraded land

IRT-16: Innovative technologies and eco-engineering 4.0: Challenges for a sustainable use of rural and urban landscapes and the SSW system

Climate change challenges

IRT-17: Climate change challenges - improving preparedness, response for climate conditions and related hazards

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Overview of IRTs

From information to implementation

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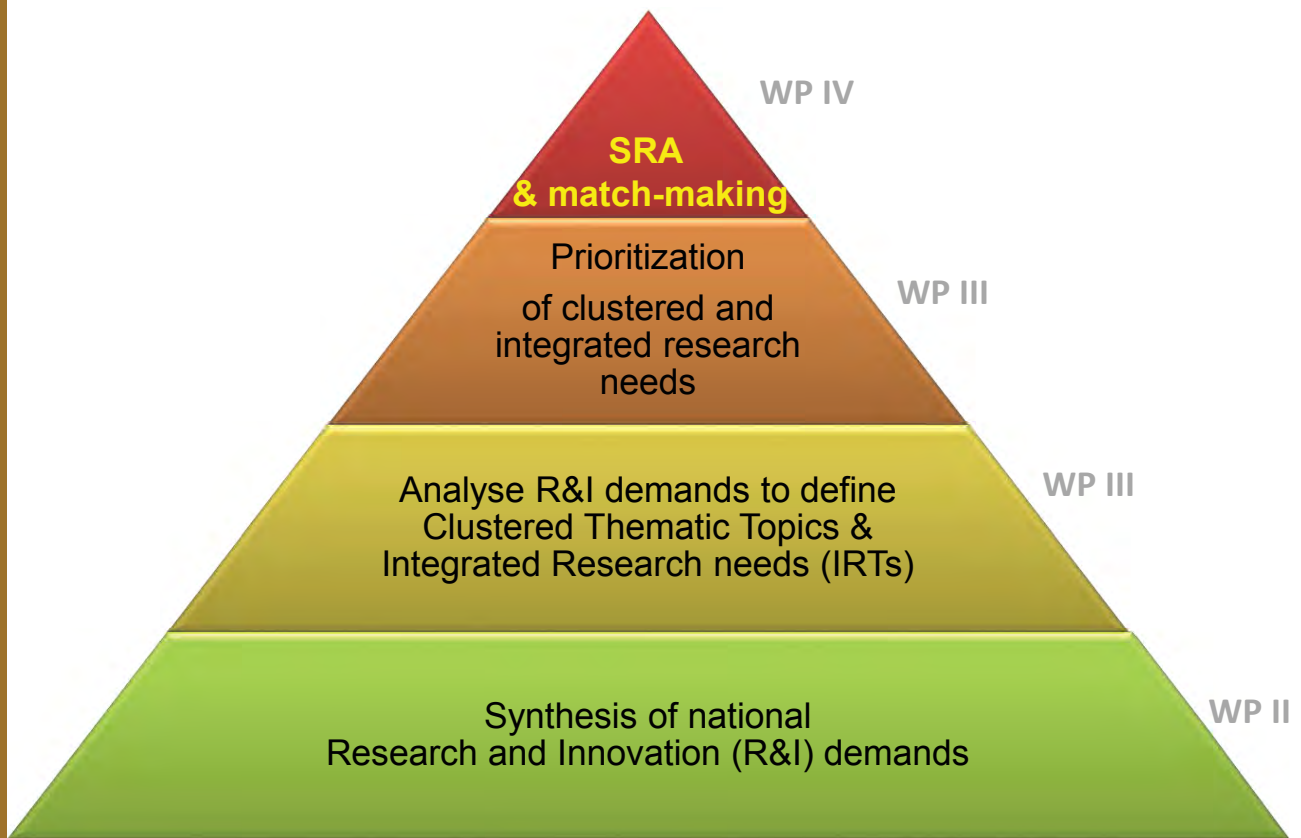
Challenges for a sustainable use of rural and urban landscapes and the SSW system

Climate change challenges

IRT-17: Climate change challenges - improving preparedness, response for climate conditions and related hazards



Making it happen



The 17 United Nations Sustainable Development Goals (SDGs)



UN Sustainable Development Goals (SDG): INSPIRATION



More on this tomorrow!

Funding models

- International funding
- Bilateral
- EU
 - Fwk
 - ERANets
 - COST
 - JPI
 - Article 185
- National Research foundations/ councils
- Public/ Private (e.g. Innovate UK)
- Third sector
- **Crowd funding**

Match making of funders

- Use the INSPI-SRIA as a high level catalyst to foster multi-lateral collaboration to fund research
- National meetings with funders to identify interest
- Introduce funders with common interests to each other
- **Networking Conference: December 2017 (Brussels)**
- **INSPIRATION4EU network of national contact persons**
- **Online and face to face meetings in 2018+**

Next steps by potential funders looking for where to invest in third party research

- Review research needs
- Select those that meet YOUR institutional funding priorities
- Identify those suitable for collaborative funding
- Inform INSPIRATION National Contacts of interest in collaborative funding for specific needs
- Make contact with potential co-funders (after introduction by National Contacts)



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INSPIRATION Research Agenda

