INtegrated Spatial PlannIng, land use and soil management Research AcTION:

National results: UNITED KINGDOM

Coordination and Support Action

Societal challenges and needs

- In the UK, sustainable development has been embedded into decision making for some years, for example by the Welsh constitution and the England'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 contain urban sprawl.
- Landscape and catchment scale approaches are increasingly seen as important for meaningful long term management strategies
- Public perceptions of soil are mixed and polarised – the residential gardener values soil the urban dweller sees it as a potential health hazard
- Previously developed land, euphemistically referred to as 'brownfield', is being seen by some as an under exploited reservoir of land for new homes

Topics / research needs to be included in the SRA

UK-1 Efficiency of primary producers. How does improving supply chain efficiency affect pressure on land use?
UK-2 Soil and groundwater remediation is difficult to achieve so best to preserve what we already have.
UK-3 Soil 'Regeneration' – how to increase to Soil Organic Matter in poorer soils, and what level is achievable, 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 courses of action.
UK-5 Demand for soil/land resources, imports and exports: Improved understanding of whole food life cycle of production, transport, consumption and waste to discern the balance between domestic, import and export.
UK-6 Competition between land-uses (land-use conflicts): How should land use conflicts be resolved?
UK-7 Targeting outputs: practical, pragmatic effort needs to be expended in targeting outputs to relevant end-users and in linking 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. forestation and to development.
UK-9 Important areas of technical innovation. New techniques to understand soil microbiology to help assess biodiversity and so understanding impacts and optimisation of land management.
UK-10 Landscape scale solutions. Integration to manage landscape not media. Precision Agriculture to improve/ conserve soil quality. Catchment-scale management involving collaboration of individual farmers.
UK-11 Assessing the values of primary and secondary production: A high value secondary producer may rely on a relatively low value primary producer, e.g Scottish Barley for Scotch Whisky
UK-12 Farming practices create valued environments. Uplands and sheep grazing; lowlands patchwork of fields and river margins depend on how farmers perceive themselves as guardians of their environment.

Republic of Ireland (A representative from EPA, Ireland attended the UK workshop)

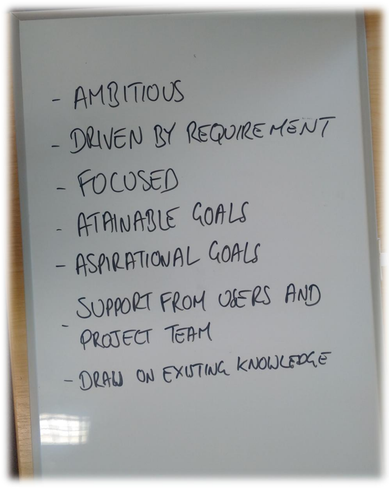
IR-1 (Generic) Risk Assessment of Contaminated Soils. Research is needed to transfer basic tools and processes into an Irish context, e.g. geology, population, demographics *etc*. from the UK and other EU countries.
IR-2 Pragmatic appraisal of environmental technologies in an Irish setting:

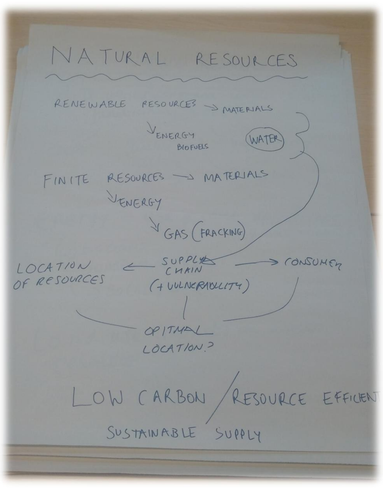
Background of UK Key Stakeholders

- Funders (Research councils, governmental)
- End users (Business, regulators, citizens, not for profits)
- Researchers

Connecting science, policy and practice

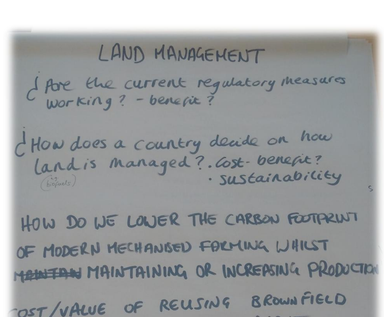
- The UK has a long track record of land use related research and survey that has informed planning and decision-making.
- A series of instruments (departmental chief scientist, parliamentary committees, briefing notes for non specialists) help policy makers and practitioners be up to speed on science
- Inherent uncertainty in environmental science is recognised but can also lead to cynicism
- Publically funded research expects impact

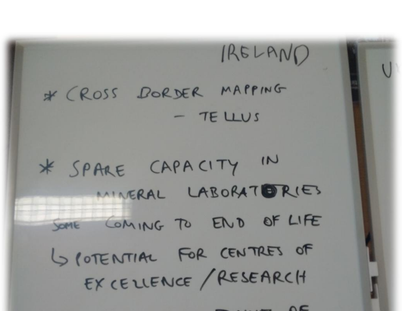




National and transnational funding schemes

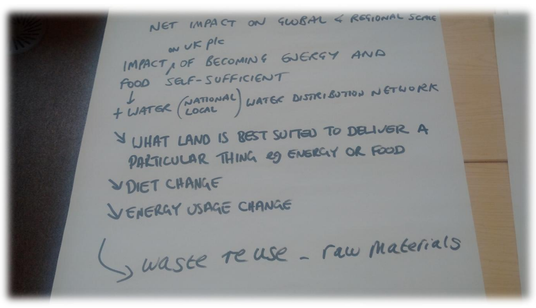
- The UK has a wide range of funding mechanisms to support research infra structure, basic & applied research and to transfer new research findings into practice.
- Funds can be accessed by researcher and end user applicants and consortia of both.
- Relevance to societal challenges and projects that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

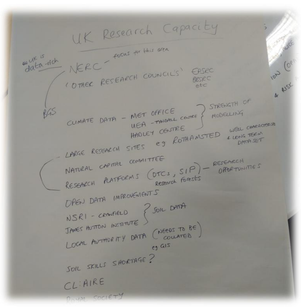


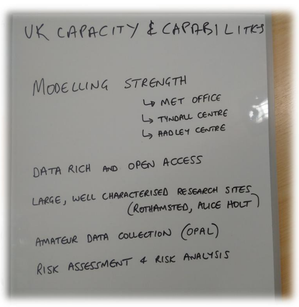


A key message from the UK:

- 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.







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