

The relevance of input from stakeholders

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Erosion

Organic Matter decline

Compaction

Salinisation

Landslides



EUROPEAN COMMISSION
DIRECTORATE-GENERAL
Joint Research Centre



European
Soil Bureau
Network

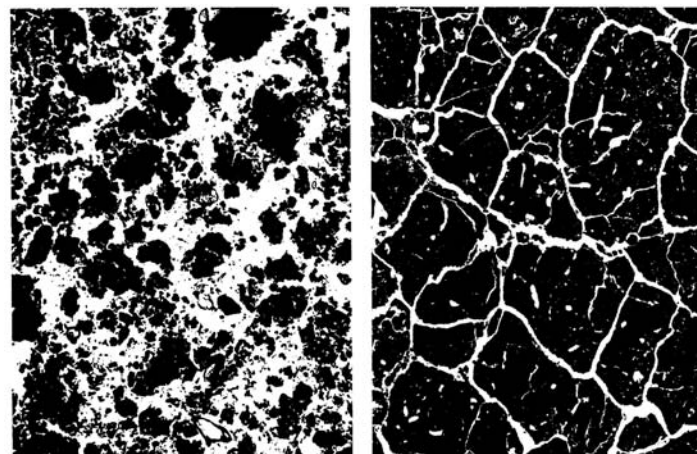
European Soil Bureau Network

- Network of the Commission
- Evolved over many decades
- 50+ scientists from all of Europe
- Advises and supports the JRC



The importance of soil

- A living system – a biological engine that supports above ground biodiversity and Earth Systems
- Characterised by variety and variability



Crawford, Ritz, Young (1993) Geoderma 56 157-172



Mandate for workshop

“For identifying risk areas, the Commission encourages Member States to use existing monitoring schemes. Over time a more harmonised monitoring approach and methodology may be developed, [exploiting ongoing work of the European Soil Bureau Network on harmonisation of methodologies](#). Risk acceptability and measures will vary in response to the severity of the degradation processes, local conditions and socio-economic considerations.”





The Scientists' role

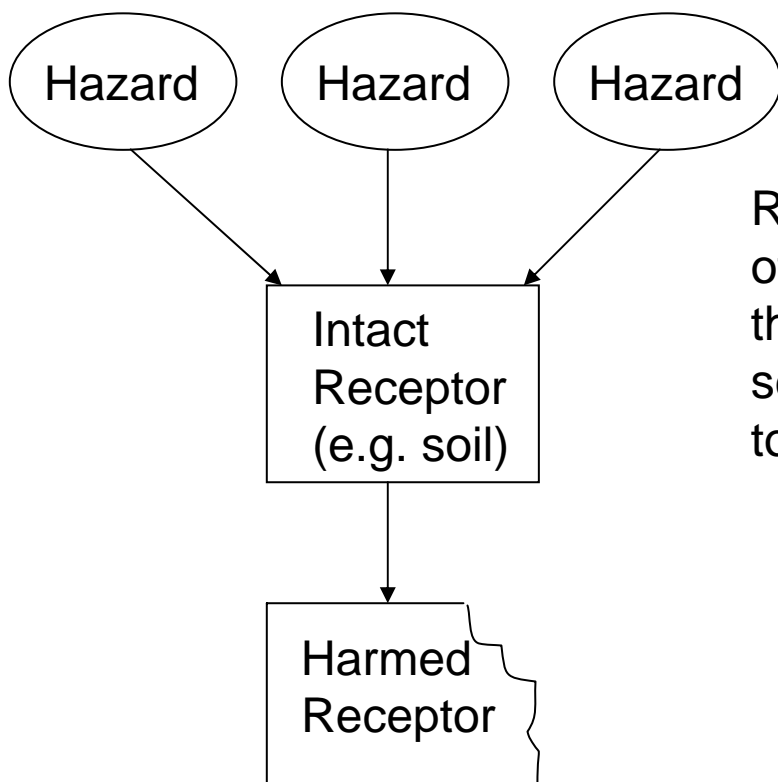
- To inform risk assessment by describing for the threats
 - Hazards
 - Risk (the probability and significance of harm to soil arising from hazards)
- To identify and describe possible risk management options



Issues for Stakeholders

- What is an acceptable level of harm to soil?
- What are the appropriate risk management measures
 - Choice of options
 - Priorities
 - Timing

Conceptual model for risk



Risk is determined by the probability of hazards acting on a receptor, the pressure of their actions, and the sensitivity of the particular receptor to these pressures



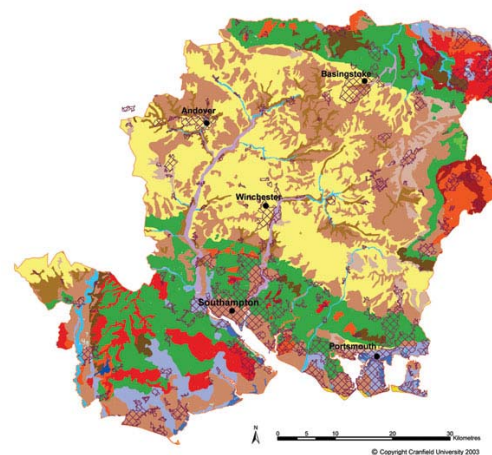
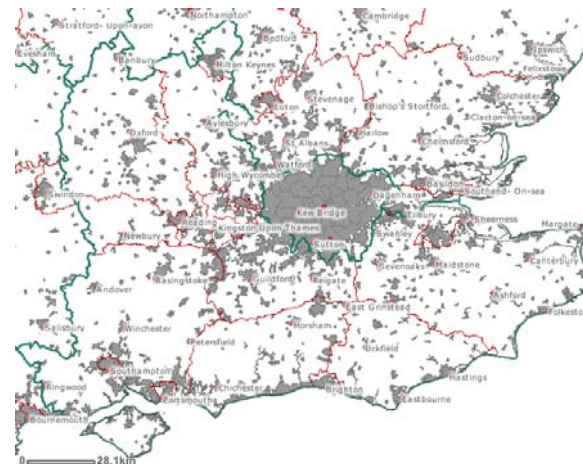


Hazards and Risk

- Scientific description covers
 - Hazards to soil (e.g. lack of vegetative cover that may accelerate erosion)
 - Mechanisms and probabilities of hazards acting on soil (e.g. rainfall intensity and frequency)
 - Response of different soils to pressures (e.g. their sensitivity to erosion pressures)

Spatial variation of risk

- Climate, vegetation, land-use, etc vary spatially and so do their pressures on soil
- Different soils vary in their sensitivity to these pressures





ESBN recommendations

- Estimate spatial variation in risk – integrating variation in pressures and different soil responses
- Adopt a tiered approach
 - Eliminate areas where risk is negligible
 - Focus where there is higher risk
- Regional determination of risk acceptability by stakeholders

Thank you

