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Soil carbon management for climate change mitigation and adaptation: framing and integrating the issue in the evolving policy environment

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Outline

- ▶ Introduction
- ▶ Soil carbon management in the current regulatory framework
- ▶ Challenges for better integration of soil carbon management in future policies



Soil carbon management in the current regulatory framework

- ▶ Importance of soil recognized at a strategic level:
 - ▶ Soil Thematic Strategy, 2006
 - ▶ Draft Soil Framework Directive, 2006
 - ▶ Communication on land as a resource, expected 2014
- ▶ No overarching policy framework for soil protection
- ▶ Soil carbon management (soil organic matter) not targeted by existing policies



| Management practices | Relevance to objectives of existing policies | Policy instrument |
|--|---|--|
| Organic manure input | Nitrates Directive | Nitrate vulnerable zones Nutrient budget plans CAP cross-compliance |
| Cover crops, perennial crops, legumes | WFD, Nitrates Directive, Resource Efficiency Roadmap, Adaptation Strategy, Floods Directive | CAP rural development plans River Basin Management Plans (RBMPs) CAP Pillar 1 greening payments |
| Incorporation of crop residues | WFD, Nitrates Directive, Resource Efficiency Roadmap, Adaptation Strategy | CAP cross-compliance (ban on arable stubble burning) |
| No-tillage practices | WFD, Nitrates Directive, Resource Efficiency, Adaptation Strategy, Floods Directive | CAP rural development plans RBMPs |
| Organic farming | Birds and Habitats Directives, WFD, Nitrates Directive, Floods Directive, Adaptation Strategy | Primarily CAP rural development LIFE+ Pillar 1 greening payments for grassland protection RBMPs |
| Maintenance of permanent grassland | | |
| Maintenance and restoration of peatlands and wetlands (including rewetting of organic soils) | | |
| Conversion of arable land to grassland in risk areas | | |
| Afforestation of cropland / woodland creation in risk areas | | |



Soil carbon management in the Common Agricultural Policy

- ▶ Pillar 1 (direct farm payments)
 - ▶ Greening measures: → 30% of Pillar 1 budget
 - ▶ Cross-compliance: GAEC standards, Statutory Management Requirements, Farm advisory → BUT missed opportunity: GAEC 7 on protection of carbon rich soils
- ▶ Pillar 2 (rural development)
 - ▶ A large choice of measures: Agri-environment-climate, organic farming, environmentally friendly investments; Farm advisory support



Challenges in developing policies for soil carbon management

- ▶ How should soil carbon management be framed?
- ▶ The need for a horizontal mechanism
- ▶ Soil carbon benefits are difficult to demonstrate and convey
- ▶ Complexity of translating science into policy
- ▶ Lower political urgency at the local level
- ▶ Institutional and financial capacities



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Thank you for your attention.

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