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Managing expectations from our land: 3 is the magic number.

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In recent years, sustainable food production has risen to the top of the EU policy agenda. Europe's land is now expected to provide multiple ecosystem services (soil functions) for society. These include: i) food production, ii) carbon storage, iii) the provision of clean water, iv) habitats for biodiversity and v) nutrient cycling. A tension exists between the demand for and supply of these soil functions on our land. We cannot expect all soil functions to be delivered simultaneously to optimal capacity, but with careful decision making we can optimise our soils to provide multiple functions. Our societal demands also vary in spatial extent, for example we may require nutrient cycling and food production to be focussed at local scale, but carbon sequestration may be a national target to reduce greenhouse gas emissions.

Every day, farmers make decisions on how they manage their land and soil. At the same time, national and European policy makers make long-term decisions on how to manage their soil resources at larger scales. Therefore, the contemporary challenge for researchers and stakeholders is to link the decision making on land management across scales, so that the practicalities of how farmers make decisions is reflected in policy formation and that policies enable farmers to make decisions that meet EU policy objectives.

LANDMARK (LAND Management: Assessment, Research, Knowledge base) is a Horizon 2020 consortium of 22 partner institutes from 14 EU countries plus Switzerland, China and Brazil. The primary objective of the LANDMARK project is to provide a policy framework for Functional Land Management at EU level. This implies the identification of policy instruments that could guide the management of soil functions at the appropriate scale. This presentation will provide an overview of the challenge faced across these scales, from local to European, it will demonstrate how local decision making must try and account for the delivery of at least three soil functions to contribute to sustainable soil management.