# Managing **S**ediment **C**onnectivity in **A**gricultural **L**andscapes for reducing water **E**rosion impacts


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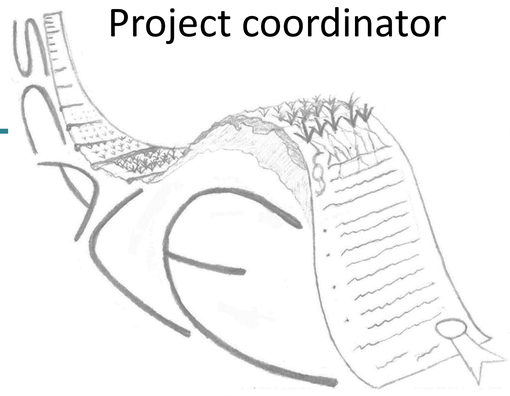

**https://scale-ejpsoil.eu**

**SCALE** is a project within the EJP SOIL and consists of 13 partners from 9 EU countries.

**Aim**: to improve soil erosion mitigation strategies by the introduction of sediment connectivity as a key consideration in mitigation strategies, which account for regional differences in erosion damages supported by erosion modelling at different scales.

**Sediment connectivity** describes how soil eroded by water can move through the landscape via linkages between landscape elements. Successful prediction of runoff pathways and associated sediment transport is of considerable importance for mitigation because sediment can move out of the field parcels and create off-site damages e.g. by polluting waterways or damaging infrastructure. Off-site impacts of soil erosion are often of greater social and economic concern than on-site soil erosion.




Examples of sediment (dis)connectivity at a parcel border, a field road and from two fields to a waterway.

## Key Messages on Soil Erosion Modelling

- Harmonisation of datasets, parameterisation and up- and downscaling procedures across different erosion models is essential for consistent soil erosion assessments and improving management efficiency.
- Uncertainty and sensitivity analysis are crucial for understanding the impact of dataset quality and parameter methods on model outcomes.
- Model scenarios incorporating connectivity requires substantial expertise and effort, but can help identify erosion pathways and optimise the location of erosion control measures based on spatial landscape variations.
- Sediment connectivity should be a primary consideration in erosion risk modelling, particularly for policy and planning purposes.

## Key Messages on Soil Erosion Mitigation

- Tailored mitigation strategies and local adaptation are necessary to address the variety in soil erosion issues and stakeholder perceptions across Europe.
- Improved subsidy schemes and participatory approaches to policy design can encourage more farmers to adopt voluntary erosion control measures.

## Benefit for Austria: Our Strategy for the Future

- Methodological harmonisation for more precise and more comparable soil erosion risk maps.
- Keen focus on strategies to implement landscape connectivity measures into future CAP (or WFD) regulations.


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