Sensor data for downscaling digital soil maps to higher resolutions (SensRes)

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Soil maps for large areas often fail to account for local variation in soil properties, due to their coarse resolutions. However, remote and proximal sensors can provide highly detailed soil information at a local level.

We therefore propose a method to downscale large-extent soil maps using sensor data. We will test the method for agricultural fields in seven European countries, using proximal sensors, drone images and satellite images. The mapped soil properties will include soil organic carbon, soil texture and locally important soil properties.

We will test drone and satellite images of bare soils and vegetated fields, and we will test the effect of fusion data from different sensors. We will also test the potential for using the downscaled soil maps in practical applications.