

# wageningen soil conference

## MASTERCLASS

### M19: Digital soil mapping in 3D space and time: a hands-on tutorial

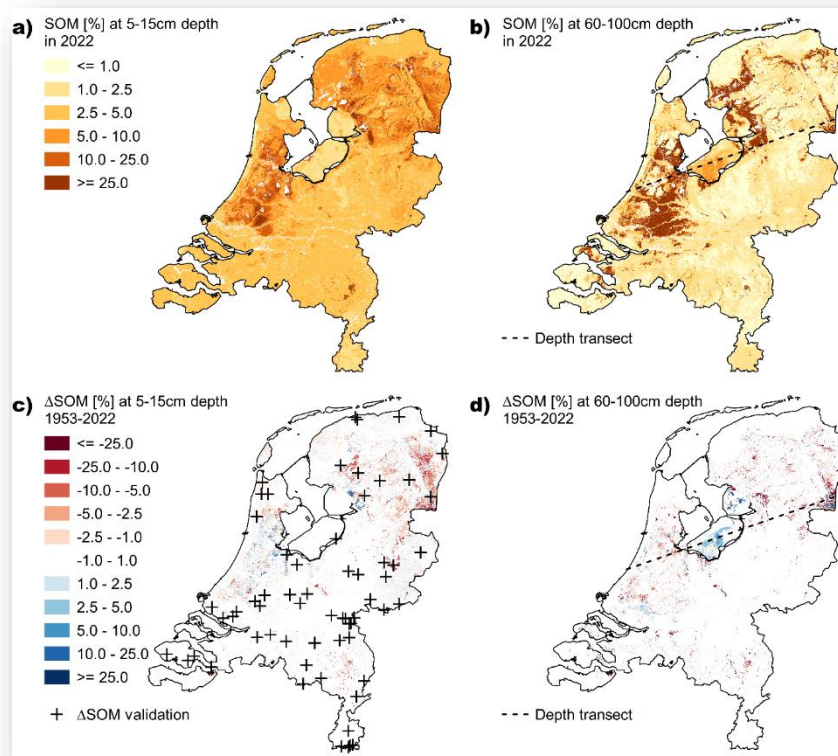
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**Short description (max 150 words, optionally add a figure in the file upload below):**

Soil maps are a key foundation for policies to ensure the sustainable use and protection of soil and to communicate the importance of soils to society. This computer practical introduces methods and tools for digital soil mapping of basic soil properties in the R environment for statistical computing. Participants will be guided through data preparation, model calibration and prediction using a machine learning algorithm and map visualization and accuracy assessment. We will use commonly-used digital soil mapping practices within the BIS-4D framework, a modelling and mapping platform for the Netherlands. The flexibility of BIS-4D allows for the prediction of soil properties and their uncertainty at any location, depth and time between 1953 and the present. The masterclass aims towards anyone interested in spatial modelling, but basic knowledge of the R programming language is beneficial.



**Theme:** Mapping and evaluation of soil functions across scales

**Keywords:** digital soil mapping, statistical modelling, machine learning

**Type of masterclass:** Tutorial