Sensor specifications	Manufacturer and model number. Spectral range. Source of radiation. Type of detector. Instrument calibration procedures. Materials of calibration standards.
Sensor measurements	Condition of the soil: air-dry/oven-dry/wet/ground, sieved/intact core. Total number of spectra recorded from the study area. Number of spectral outliers and outlier method used. Number of training and number of validation spectra and methods used for selection. Experimental values for x, μ_s, μ_w, θ; see Eq.(2). Sensor outliers and method used to identify them.
Laboratory analysis	Laboratory method used laboratory code and accreditation. Number of blind duplicates and the measured standard error of the laboratory (SEL). Mean, standard deviation, minimum, median, maximum values of the measured data. Analytical outliers and method used to identify them.
Transformations pre-processing, pre-treatments	Type of transformations used on the laboratory and sensor data. Pre-processing methods used on the sensor data. Pre-treatment methods used on the sensor data. Method used for correcting the effects of water on the sensor data.
Spectroscopic modelling: training	Number of data in the spectral library. The algorithm used for modelling. The cross-validation method used. The optimized setting of the model and the model RMSE and R^2. The model diagnostics and residuals plot.
Spectroscopic modelling: validation	If appropriate, method for back-transformation of the response variable. The validation RMSE, ME, SDE, and concordance correlation. Plot of the observed vs. predicted validation data.
Spectroscopic modelling: prediction of “unknowns”	Mean, standard deviation, minimum, median, maximum values of the predicted data.
Data sets	All sensor data collected from the study area. The training and validation data. The analytical data used for calibrating sensors. Sample identification numbers. Geographic locations (WGS84) and depth layers where measurements were taken. Date and time of measurements.