



Need for standardizing geophysical measurement - CEN Workshop "Best practice approach for electromagnetic induction (EMI) measurements of the near surface"

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Nowadays, the application of geophysical measurements to characterize the near surface at different scales is increasing. Prerequisite for the application of geophysical measurements for proximal soil sensing are reproducible and reliable data. The procedure of the CEN Workshop of the European Committee for Standardization (CEN) seems to be an adequate framework to introduce standardized procedures into geophysical measurements. Especially the electromagnetic induction (EMI) method, a non-invasive mapping method is applied in several areas, including geological mapping and civil engineering surveys, agriculture and forestry, environmental monitoring, groundwater protection, raw material prospecting and archaeology. We want to establish a widely accepted voluntary standard for a best practice of EMI with help of the CEN Workshop "Best practice approach for electromagnetic induction measurements of the near surface", because EMI are widely used for soil mapping and there are several problems with the comparability of EMI results which have to be considered in such a standardized approach.

The CEN workshop agreement (CWA) focuses on the near surface application of this method, especially related to soil and water. The overall goal of the workshop is to develop a standardized approach for electromagnetic induction measurement in order to ensure that results of different measurements are comparable, in terms of analysis procedures and information content of data. The proposed 'best practice approach' will help to minimize such potential problems of e.g. reproducibility of measurements and will help to improve the comparability of data. This provides the opportunity for reliable interpretation of data in terms of subsurface structures and parameters, as well as for reliable comparability and joint interpretation of measurements gathered at different times and with different instruments. Within the CWA following topics will be covered: advantages and limitations of electromagnetic induction measurements, calibration, stability and sensitivity evaluation of EMI devices, surveying approaches, best practice measurement at field site, data processing and evaluation, quality assurance and qualitative and quantitative use of EMI data.

About 40 participants from most of the manufactures of EMI devices, institutes, universities and SME's signed for membership. The poster presentation gives a short overview about the best practice approaches and approaches for quality assurance proposed by the CEN consortium.

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