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THE SOIL MAP PARADIGM: THE PRODUCTION OF VERIFIABLE DIGITAL LANDSCAPE PROJECTIONS VERSUS COMPLEX-CODED EXPERT VIEWS

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Modern GIS techniques allow the processing of large amounts of high resolution soil data: large areas covered by high resolution soils maps (e.g. 1:50,000) can be easily processed, and large amounts of plot-level measurements can be accurately upscaled using high-resolution digital elevation models. Both kinds of data exist in Europe in astonishing densities, but yet are not available. The number of map applications producing policy-relevant spatial information at continental and national level is often limited to a set of simple pedo-transfer rules. The comparability of data sets is also limited, especially beyond country borders, terminologies not described, and mapping rules usually not documented. This makes it difficult to validate soil landscape delineations, and legacy mapping data thus seem to be of limited value for example to cross-validate digital soil mapping. Recently, other approaches such as the use of radiometric data sets are becoming re-discovered, and satellite data for the mapping of soil properties in areas sparsely covered by vegetation are being intensively investigated. Data harmonization activities, the building of new data bases, has largely ceased in Europe; at parallel, initiatives for developing new high-resolution data sets based on digital soil mapping including remote sensing seem to gain importance. This presentation will attempt for building a conceptual umbrella over the possible future of soil data development, harmonization, networking and data exchange in Europe.