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## Application of information originating from spatially non-exhaustive ancillary observations in digital soil mapping

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Due to certain socio-economic processes and technical pressure, the number of potential data sources targeting the Earth's surface increases rapidly as well as the data generated by them. Soil mapping heavily relied on these changes in the paradigm shift, which took place in the population and interpretation of spatial soil information in the last decade. In digital soil mapping practice, auxiliary, environmental co-variables, which are related to soil forming factors and processes, have been taken into account in spatially exhaustive form. However, the potential hidden in spatially non-exhaustive (most frequently point-like), ancillary information – originating from observations also targeting the soil mantle – is far from being exploited. In their thematic features, accuracy and reliability they are inferior to primary field and/or laboratory measurements collected directly, but they are generated in more facile, cheaper way, in greater volume, with denser temporal and spatial coverage and characteristically they are available in significantly easier form. Data sequences of various installed field sensors, data collections by proximal sensing techniques, information supply by farmers and land managers as well as citizen science are considered as possible information sources. Essentially, the (soft) data supplied by them don't provide spatially exhaustive coverage, neither direct pedological reference, nevertheless they are hypothesized to be utilized as auxiliary information within DSM framework. In a recently started project we started to investigate, (i) in which way and with what efficiency these ancillary information originating from different secondary sources can be applied, furthermore (ii) in what manner their application influences (hopefully improves) the results, accuracy and reliability of goal-specific spatial predictions. The elaborated digital mapping procedures, which are based on (i) large amount of data with differing quality and (ii) integrated geostatistical and data mining methods can be absorbed in various earth and environmental science applications.

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