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Modelling and mapping global soil information

Laura Poggio, Luis Moreira de Sousa, **Gerard Heuvelink**, Bas Kempen, Zhanguo Bai, Ulan Turdukulov, Maria Ruiperez Gonzalez, Eloi Ribeiro, Niels Batjes, and Rik van den Bosch
ISRIC - World Soil Information, Wageningen, Netherlands (laura.poggio@wur.nl)

Soil information is fundamental for many global applications, such as food security, land degradation, water resources, hydrology, climate change and ecological conservation. To address these diverse needs, it is important to provide free, consistent, easily accessible and standardized soil information. SoilGrids meets these requirements being a global product supporting global modelling and providing complementary information for the development of regional and national products in data-poor areas. This presentation will focus on the methodological aspects for modelling and mapping of global soil information. We describe the selection of models for global mapping using quantile random forest and recursive feature elimination to obtain a parsimonious model. We also use a refined cross-validation procedure to account for bias caused by spatial differences in sampling density at different depths. SoilGrids also quantifies location-specific uncertainty at global level by computing 90% prediction interval limits.