

## **M18: Mapping rootable depth and plant-available soil water & nutrients to evaluate soil functioning in terms of agricultural productivity**

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This masterclass shows how maps of rootable depth and plant-available soil water and soil nutrients can be derived from maps of primary soil properties. The methodology relies strongly on pedotransfer functions and other rule-based inferences. The derived soil qualities support the evaluation of soil functions including the capability of the soil to provide for buffer against drought, agricultural produce and food security. We illustrate the mapping procedure with case studies from Africa and let participants derive soil functional maps themselves in several exercises.

Plant-available water holding capacity (v%) of the soil fine earth over 2 m depth

