



Delineating reference- and altered- state soil areas within a landscape for assessing the soil condition and capability dimensions of soil security

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Soil security assessment recognises five dimensions. Two of these dimensions, namely condition and capability, relate to the biophysical capacity of the soil and recognise that such capacity can be changed on shorter time-scales by landuse management and more generally anthropogenic forcings. Condition measures particularly those properties that are capable of such change on shorter time-scales. In order to gauge soil security the condition is measured relative to the capability for performing soil functions at a reference state. The reference state can be defined as the least-altered soil for a particular taxonomic delineation in a landscape (e.g., soil series). Two methods for such reference-state and altered-state delineation and assessment will be presented:- one based on soil series, and one that can operate where no prior detailed soil mapping is available.