Guidelines for soil data preparation

- Each profile must have a unique identifier. Use column name ‘ProfID’ for the column that stores this identifier.

- One column stores the upper depth of the layer, one column the lower depth

- Required columns: ProfID, X_coord, Y_coord, DepthFrom, DepthTo, SOC, BD.

- For each profile, subsequent soil horizons/layers should be on top of each other, not next to each other

- Coordinates in decimal degrees or metres. Not in degrees-minutes-second

- Derive bulk density data using a pedotransfer function (cookbook) or use SoilGrids bulk density layers (supplied).

- Compute SOC and BD for the 0-30 cm layer by taking a weighted average of the horizons/layers that make up this target layer (use function computeSoilProperty).

- Compute SOC stock in kg/m2 for (from SOC and BD):

  \[
  \text{SOC}/100 \times \text{BD} \times 0.3 \quad \text{(SOC in \%, BD in kg/m3)}
  \]