Project Database of ICP Forests
PROJECT DESCRIPTION

PROJECT INFORMATION

Project title: Between-Site Variability of Turnover and Transport Parameters Calibrated with a Vertically Explicit SOM Model

Project ID: 33

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PROJECT DESCRIPTION

I want to perform a Bayesian calibration of a continuous, vertically explicit SOM decomposition model with microbial interactions and sorptive stabilization using SOC and SO14C profiles from CarboEurope IP, CANIF, FORCAST and other sites. My objective is to disentangle the effects of:

- sorptive stabilization
- colimitation of decomposition by SOC availability and microbial decomposers
- transport and recycling of SOC from upper soil layers
- other environmental conditions (e.g. temperature, moisture, pH) on the apparent age and stability of deep soil organic carbon.

I would like to validate the inferred parameters against ICP Forest Level II SOC profiles, which where identified by Hiederer (2009) to be suited for an evaluation of SOC with depth. I might want to test using some ICP Forest Level II profiles also for the calibration of model parameters, although the radiocarbon profiles are probably most informative.