Supplementary Materials to **A Global Meta-analysis of Soil Organic Carbon in the Anthropocene**

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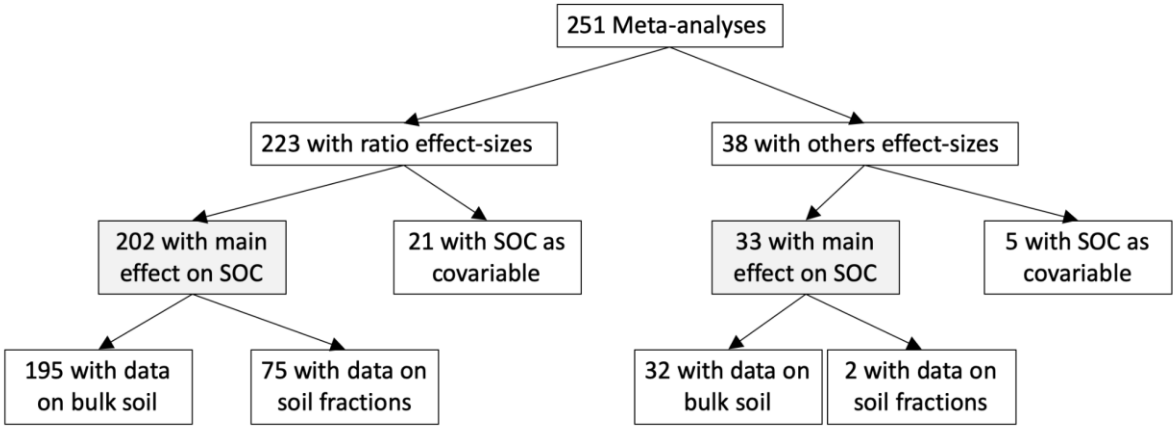
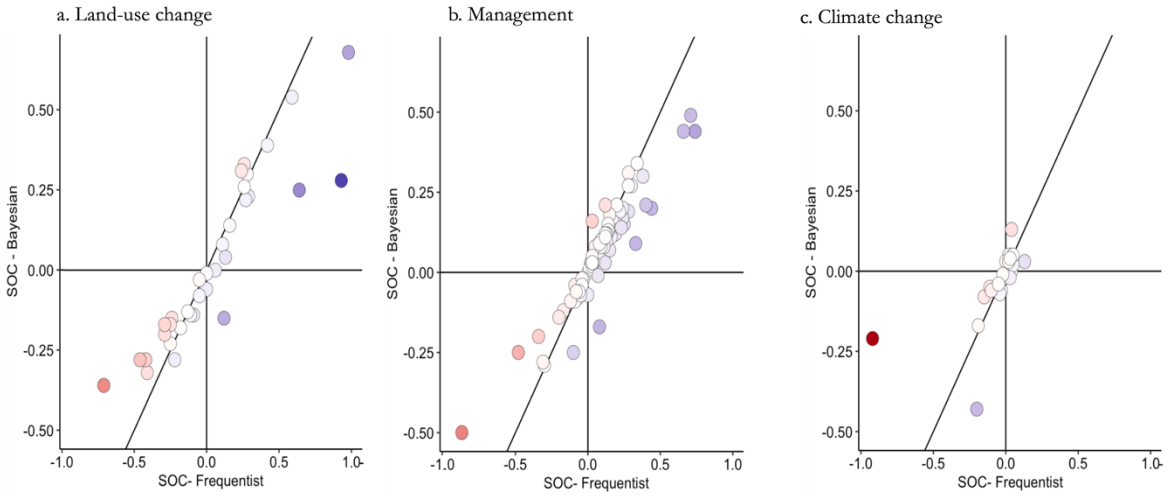
Supplementary Figure 1. Categorization of available meta-analyses according to the metric used to calculate the effect-size, the role of the SOC variable and the type of carbon analysed. The total number of meta-analyses with main effect on SOC is 230 (202+33 – 5 meta-analyses presenting both effect-sizes as ratio and other effect sizes).

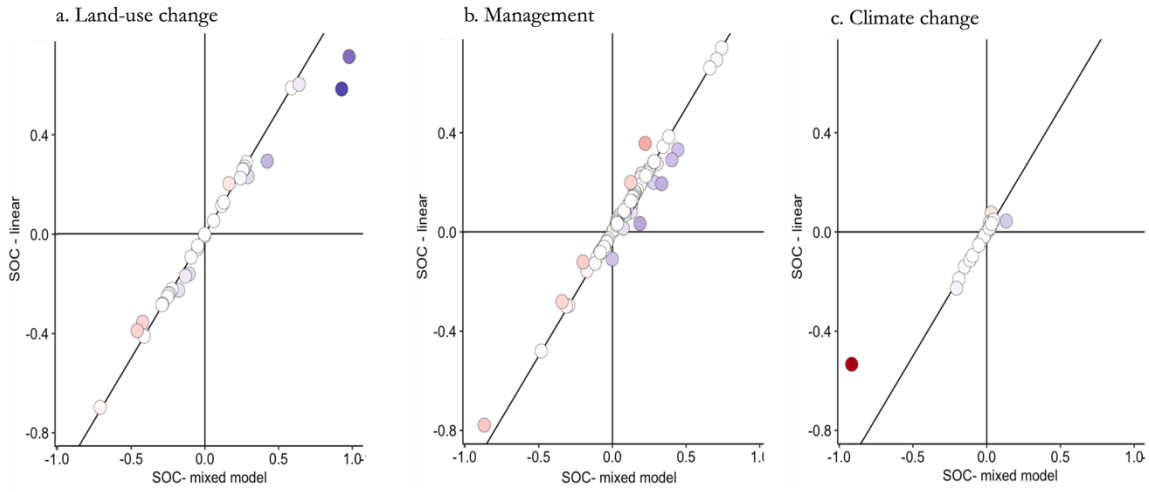


The list and characteristics of the meta-analyses is available here:
https://rpubs.com/dbeillouin/List_studies

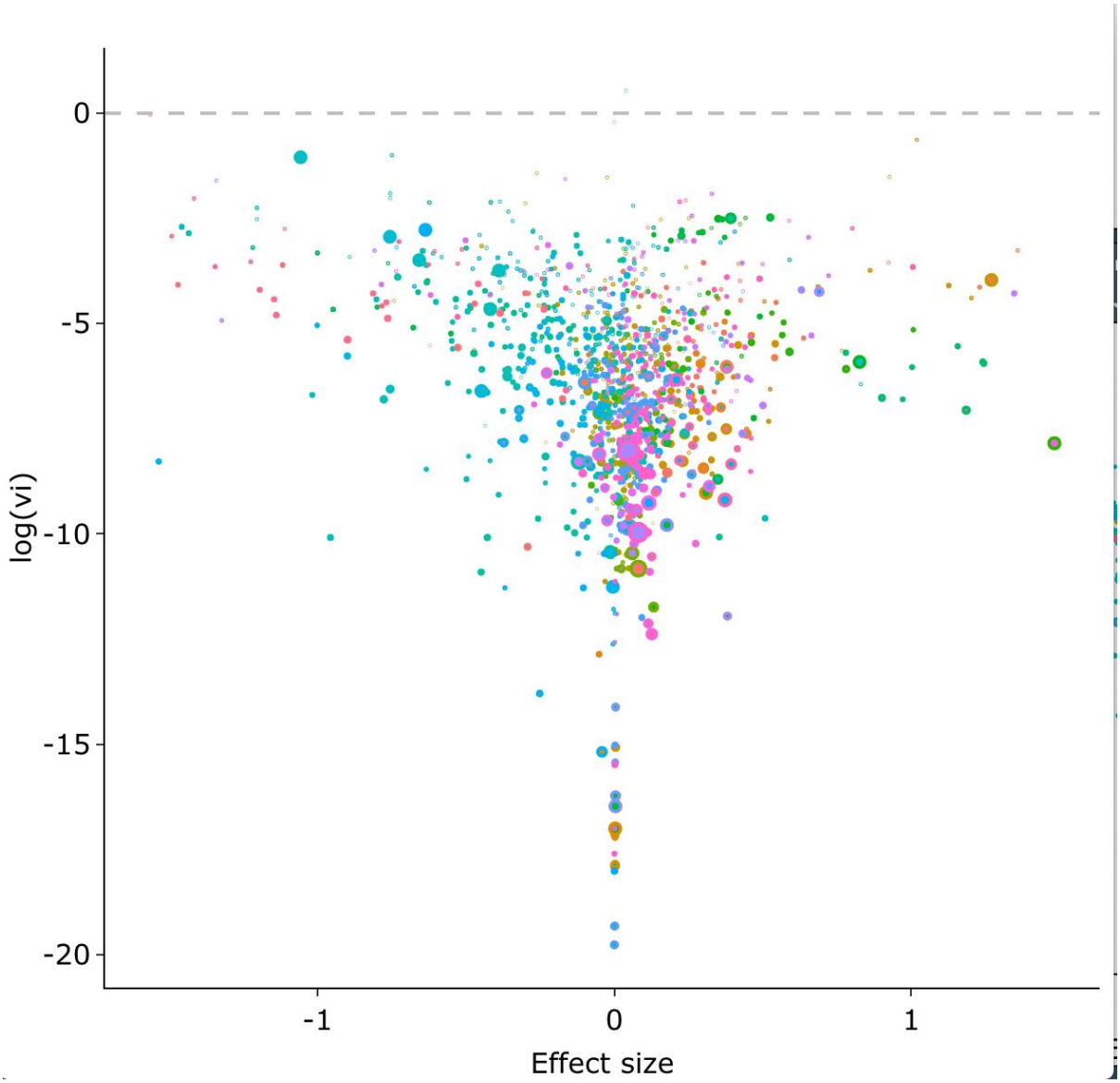
Supplementary Figure 2. Comparisons of the results between frequentist and Bayesian inference for land-use change (a.), Management (b) and Climate change (c) factors. Best frequentist and Bayesian models were selected based on their AIC and WAIC, respectively. Each point represents a mean calculated effect-size. Colors indicate the difference between the two models.



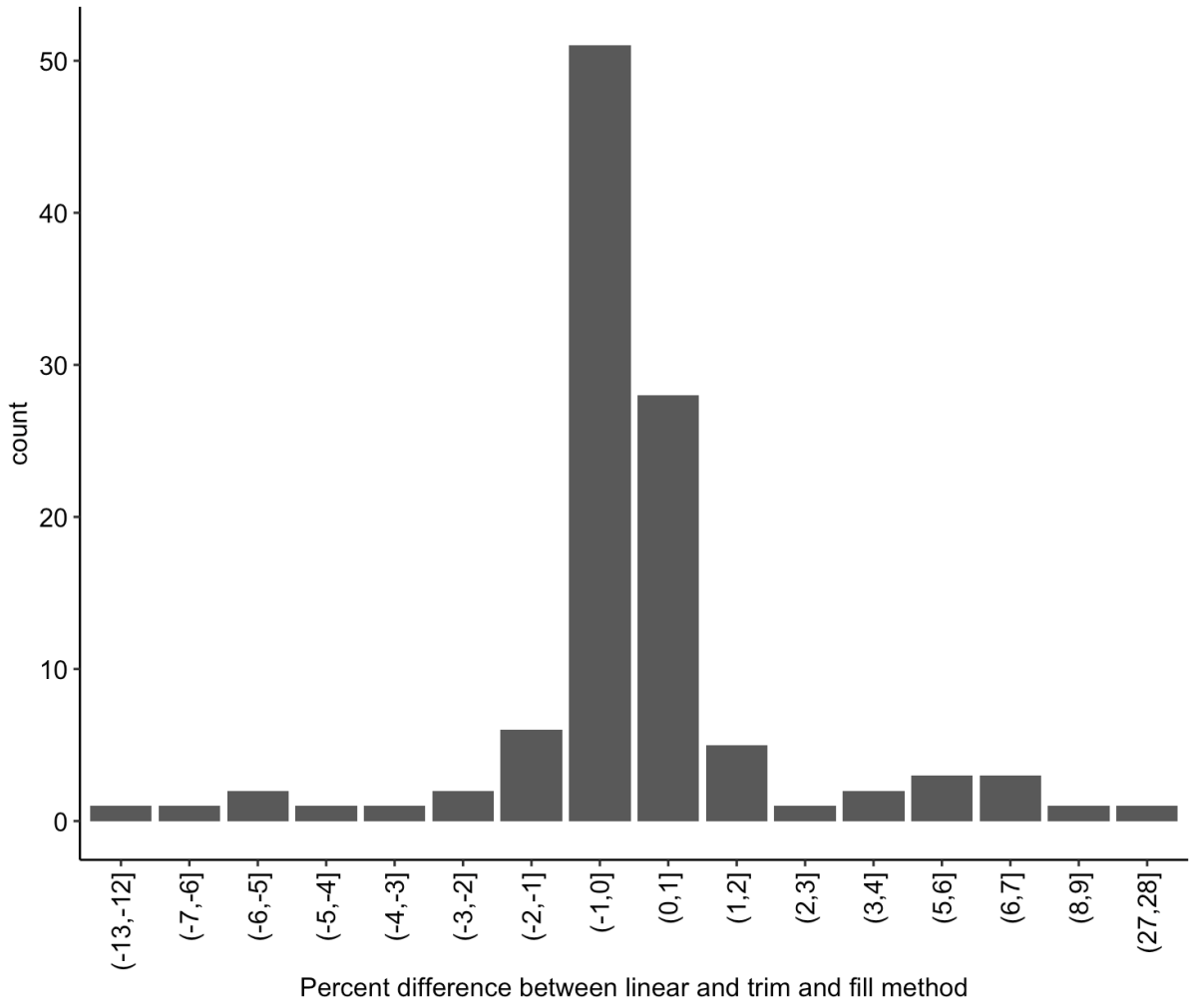
Supplementary Figure 3. Comparisons of the results between the best frequentist mixed model (selected based on their AIC) and fixed effect model for land-use change (a.), Management (b) and Climate change (c) factors. Each point represents a mean calculated effect-size. Colors indicate the difference between the two models. Details of the information used to make this graph are available at : https://rpubs.com/dbeillouin/Suppl_soil_depth



Supplementary Figure 4. Funnel plot: Mean effect size vs. their precision for the whole database. Each point represents an effect-size. The bubble size is proportional to the number of Data. Color represent the various land-use type.



Supplementary Figure 5. Comparison between linear and trim and fill method impact on the mean estimates.



Supplementary Figure 6. Comparison of results (when available) between SOC Stock and SOC concentration for land-use change (a.), Management (b) and Climate change (c) factors.. Only few comparisons were available to compare results between SOC stock and SOC concentration.