

Interactive comment on “Global CO₂ uptake of cement in 1930–2019” by Rui Guo et al.

Anonymous Referee #2

Received and published: 17 January 2021

General comments This manuscript works on an investigation on the use of an analytical model to estimate the amount of CO₂ uptake from 1930 to 2019 in four types of cement materials including concrete, mortar, construction waste and cement kiln dust. It is a topic that has not been widely covered in the literature, and therefore, a subject of great interest, but it is somehow limited in the analysis and application of these results. This paper is useful for evaluating the real environmental impact of the cement industry. This dataset and the estimate methodology may serve as a set of tools to assess the emission and, more importantly, the uptake of CO₂ by cement materials during their life cycles.

Specific comments Carbonation of cement produces calcite, whose dissolution also consume CO₂. How do you consider this effect of calcite dissolution on the CO₂ uptake of cement?

C1

Interactive comment on Earth Syst. Sci. Data Discuss., <https://doi.org/10.5194/essd-2020-275>, 2020.

C2