Earth Syst. Sci. Data Discuss., editor comment EC1
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# Comment on essd-2021-228

David Carlson (Editor)

Editor comment on "A comprehensive and synthetic dataset for global, regional, and national greenhouse gas emissions by sector 1970–2018 with an extension to 2019" by Jan C. Minx et al., Earth Syst. Sci. Data Discuss., https://doi.org/10.5194/essd-2021-228-EC1, 2021

Many researchers 'watch' this product while applauding the authors for this effort. We (they) all want to help authors produce a definitive product of highest quality.

The comments that follow, extracted from a longer message but conveyed verbatim, come from one interested reader.

"the authors should defend the coherence of a database where non-LULUCF sectors data and LULUCF data appear to be very differently framed. The first set of data is a bottom up approach based on EDGAR, i.e., activity data and default IPCC EF coefficients—an approach that basically mimics how national GHG inventories are made by countries. The second is based on bookkeeping models from the literature, which are completely different from how countries report. Specifically, they do not consider forest carbon sinks anthropogenic and thus exclude them. This makes the data very different from those from the countries, contrary to the first set. A corollary or perhaps a pre-requisite to that explanation of coherence would be: what is the scope of the database."

"... the authors should greatly improve their results and discussion sections. When presenting and comparing data for agriculture ad LULUCF data to existing databases – they should explicitly include a discussion on comparisons to FAO data –after all they have FAOSTAT in Tab. 1, listed among the relevant databases."

"... they should acknowledge the existence of a very vibrant discussion (eg grassi et al 2021 nature CC and previous work) where people are arguing for and against this or that approach to estimate LULUCF data, precisely pitting models and bottom up methods ‘’against each other’’. Which side of the discussion does this work fall on ? what so the comparisons of their data to both approaches say? This is entirely missing from the paper but in my view should be part of their argumentations justifying one more database on GHG emissions –especially the LULUCF part."