

Review ESSD-2019-152, global cement emissions

Good product, important contribution.

Data download easily and cleanly from Zenodo. Using the .csv file, I can easily reproduce the emissions time series as shown in Figure 2. Likewise from the .xlsx file.

Page 7 lines 3, 4: If this statement “The rebound in Chinese cement production, and therefore emissions, is the main reason for global emissions to have regained the level of 2014.” Is true, and this reviewer accepts it as true, then the green line in Figure 1 should show, since 2014, the same decline and rise as the blue line in Figure 2? Instead the line in Figure 1 shows that global production did not rise since 2014?

Page 7 line 13: “Uncertainty increases sharply in 2018 because of the use of more provisional data.” Reader does not see a sharp increase for 2018 in Figure 2?

Page 9, legend to Figure 3: Most readers will not know, without explicit reference, that Olivier et al. 2016 = the EDGAR 4.3.2 Fast Track product.

This reader would prefer to see the list of references on page 10, after data availability and conclusions. Before the appendices. I understand that this author adds significant information and references in the appendices, but those additions could occur at the end of each appendix? Inconvenient to scroll down 50-some pages of country data to check a reference from the main text. I would also prefer to see the uncertainty paragraphs, currently in Appendix D, incorporated into the main text; ESSD guidelines <https://www.earth-syst-sci-data.net/10/2275/2018/> seem to support such a change.

Manuscript now has this order:

Narrative
Appendix A - estimates
Appendix B - production data
Appendix D - uncertainties
Appendix C - country-specific data

Need to re-order or. re-name? Or, add uncertainty to main text and therefore delete Appendix D?

In Figure C2, production data again level off after 2013 or 2014. But statement above about China suggests otherwise? E.g. here again we see production leveling off since 2014 while other data clearly show emissions rising to a peak in 2018? What am I missing? Related to the increase in clinker ratio shown in C3, e.g. so production could rise but emissions stay level, but still inconsistent with earlier (Page 7, lines 3,4) statement?