

Interactive comment on “Uncertainties in the EDGAR emission inventory of greenhouse gases” by Efisio Solazzo et al.

Anonymous Referee #1

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General Comments

The article describes the methodology used to quantify the structural uncertainty of the EDGAR inventory of GHGs. Although the methodology isn't conceptual new (it largely follows the one suggested by the IPCC guidelines) I agree with the authors that the qualification of its accuracy and quantification of its uncertainty are essential added values for the variety of users of the database and as such justify a paper with a detailed description of the method constructed. Although the value of the study lies more in the precise description of its method and choices made than in the exact outcome of the numbers (which of course will change in the future when new insights will lead to different values for certain u_{AD} and u_{EF}). At the end of the paper a short but valuable discussion is included about the effect of several of their choices on the

C1

outcome of the calculated uncertainties.

Specific Comments

I found the sentence in L36 and further rather difficult to read, maybe reword for more easy reading?

I recommend to include a sentence somewhere at the beginning of the methodology section mentioning the fact that the presented uncertainties only relate to sources included in the database and as such say nothing about the missing sources and thus overall uncertainty of the total human induced emissions.

What is meant with the sentence in L97-98, especially the part 'than for recent years'?

What is the use of L160-163? Why not just put a period before 'allowing' and remove the rest since they are just an explanation of the words?

I have several related questions over table 5: first of all what is the source of table 5? No justification is given in the text. If it is the status of the country in the convention I think the whole Table can be left out since using the color legend in the figures is enough information. If the authors decided themselves which country is industrialized or developing I would expect a discussion why China is developing while several Caucasian countries (e.g. Armenia) are defined as industrialized. Even then Table 5 could be shortened by mentioning industrialized countries only and state the 'non mentioned' countries to be 'developing'.

L479 Why are numbers used of -0.45% and 0.41%? Are those significant or should they be reported as 0%?

Technical Comments

In the text several times a reference is made to Olivier and Peters (2002), Olivier et al., (2002) and Olivier (2002); in the reference list, however, only Olivier (2002) is found. Are all these articles the same or should the reference list extended?

C2

L29 remove 'and for'

L52 replace 'assumes' by 'should have'?

L128 while the larger values [are assigned] to: add words between brackets?

L182 'upper' should be replaced by 'lower'

L189 typo u_Emi -> u_EMI

L225 typo is propagate -> is propogated

L340 remove 'in'

L473 define UPL after 'upland'

L474 is it DWP or DWE?

L585 add 'is' 'between and-almost'?

L683 typo be take -> be taken

Interactive comment on Atmos. Chem. Phys. Discuss., <https://doi.org/10.5194/acp-2020-1102>,
2020.