

Interactive comment on “Multi-gas and multi-source comparisons of six land use emission datasets and AFOLU estimates in the Fifth Assessment Report” by Rosa Maria Roman-Cuesta et al.

Anonymous Referee #1

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General comments:

This manuscript compared the gross AFOLU emissions from 6 land use emission datasets over tropical regions, including their newly published ‘Hotspots’ dataset combined from multi-studies (Companion Paper bg-2016-99). Authors well identified the agreements/differences between datasets not only by aggregated emissions, but also by emission sources, by gases, and by regions/countries. It further revealed the efforts to make in the future assessments on AFOLU emissions. In my view, this kind of study could really help people understanding the strengthens/weakness of available land use

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emission datasets before using them. However, there are several issues should be addressed.

Specific comments:

Table 2a is missing, which makes hard to understand part of the results. Table 3 is really not easy to understand even with the explanations in the main text. It is necessary to think about rearranging it in a clearer way. For example, gas-specific sub-tables might be used, and sources could be list in the table instead of using numbers. Sect. 3.2.2: Forest degradation is not shown in the figures / tables (e.g., indicated with a ‘{’ as the sum of fire and wood harvesting). But suddenly as a parallel section as wood harvesting and fire, it might confuse readers. l. 570: Please further justify the ‘least reliable’ emission sources for each dataset? For example, which criteria(s) the assessment is(are) based on? l. 594-612: The discussion on RF is not the objective of this manuscript, which appears to unnecessary given the already long main text.

Technical corrections:

l. 216-218: Duplication of l.211-212. l. 323: It might be better to replace the ‘our’ by the name of dataset, since the objective of this manuscript is comparison rather than presenting a dataset. l. 341: 2000-2009 is indicated for the value of 4.03 PgCO₂ yr⁻¹. l. 474: ‘;’ is redundant or maybe there are more reference?

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