

Interactive comment on “Vista-LA: Mapping methane emitting infrastructure in the Los Angeles megacity” by Valerie Carranza et al.

Anonymous Referee #1

Received and published: 21 August 2017

1. In general the manuscript describes an important GIS dataset for assisting with the improvement of methane emission estimates in the South Coast air basin. The authors make a strong case for why the methods described will be useful in other areas, especially in California, but even nationally and internationally. At this stage, the dataset does not include emissions themselves; but, the attributes data do include some activity information that will be useful in making bottom-up emission estimates in the future. A table that summarizes, for each major source type, the level of completeness of the activity data included in the dataset would be a useful addition to this manuscript. Are all, most, some, or none of the needed activity data included in the dataset for each of the major source categories included?

2. Lines 39-40: “Recent studies have shown that mitigating CH₄ emissions yields large

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near-term climate benefits due to CH₄'s relatively short atmospheric lifetime (Dlugokencky et al., 2011).” Suggested clarification: Methane yields large near-term benefits due to its short lifetime AND its high GWP.

3. Several of the statements in the Introduction section, added to support the utility of the dataset, appear to be in conflict:

a) Urban areas are globally significant sources of methane (line 57).

b) Urban methane is mostly from fossil fuel sources (line 72).

c) By far, most methane in California is from livestock and waste (Figure 1).

Please clarify the text in the Introduction section to explain how statements a) and b) do not conflict with information presented in Figure 1.

4. In the Introduction section, it would be helpful to mention the CALGEM dataset where other relevant datasets are discussed since CALGEM is discussed in the Discussion section (line 698).

5. Lines 714-715: “. . .rice cultivation and coal mining were the only source types contributing >1% of total emissions that were not included.” Statements here were confusing to me. Is the “total” referred here the US total? Please clarify.

6. Line 206 and line 239 mark subsections “Data processing and validation:” and “Limitations.” It is unclear why in other parts of the manuscript these subsections are combined. Recommend: Combine these subsections or separate the equivalent subsections to maintain parallel structure with the manuscript.

7. Line 325: “. . .these data under IPCC Level 3-1B2)” seems to be missing text.

8. Line 493: “data was” → “data were”.

Interactive comment on Earth Syst. Sci. Data Discuss., https://doi.org/10.5194/essd-2017-65, 2017.

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