

Interactive comment on “Expansion of oil palm and other cash crops causes an increase of land surface temperature in Indonesia” by Clifton R. Sabajo et al.

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Received and published: 22 August 2017

1. I am unclear how the data in Paterson et al. (2015) supported LULC change in Indonesia as was stated in the manuscript. The authors should clarify.

Line 718 (in the discussion): Paterson et al. (2015) mention that the LST in Malaysia increased over the last four decades of 2.7 – 4.0 degrees C per 100 years. This is an example of LST change in another region close to Indonesia. However, this is not from first hand observation, data or research but results from the Malaysian Meteorological Department. We admit that this reference is misplaced here and removed the reference to Paterson et al. (2015) from the discussion.

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2. They could also write LULC in full at first with the abbreviation in brackets afterwards.

We realize that the abbreviation LULC is introduced in line 600 and that it was not defined anywhere else. We added the full words followed by the abbreviation in line 600 as “LST patterns across different land use and land cover (LULC) types.

3. The English could be tightened up in parts of the paper. a. E.g. they start sentences with “We” on lines 31 and 34. Also, this is not the passive voice. Similarly, “Our” lines 40 and 43.

We have tried to improve the English in the manuscript, removing the repeated words in the same paragraph, such as the “we” or “our” in the indicated lines. We have especially tightened the abstract, but kept it in active voice, as the Biogeosciences’ guidelines do not explicitly mention the preferred style of writing.

b. Line 57: “in the past decades” is imprecise and clumsy.

We changed this to “in the past two and a half decades” to refer to our study period 2000 - 2015

c. Lines 66-69: Three “and”s are used in this sentence. Not the best English.

The biophysical variables (albedo, emissivity and surface roughness) affect gas and energy exchange processes between the land surface and the atmosphere. We did not find any obsolete “and” in this construction.

d. Line 75: Replace “rise” with “increase”.

We changed the verb as suggested.

e. Line 94-96: You should not have to explain what the “vice versa” is.

We removed the “vice versa” and connected the remaining sentence to the previous. We wanted to describe both situations of ET increase and ET decrease: what happens when ET increases and when ET decreases. The rephrased sentence is now: “In case

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ET is decreased, surface temperatures and fluxes of sensible heat (H) increase. On the other hand, when ET increases, increased LE fluxes lower surface temperatures and decrease H fluxes (Mahmood et al., 2014).”

f. Anyway, I will stop there as its too much work to point out other such smallish things. Maybe you consider these unimportant...

We thank Dr. Paterson for his comments and suggestions for improvements. We are happy to incorporate the suggested language corrections. Additionally, we reread the entire manuscript and made further English corrections.

Interactive comment on Biogeosciences Discuss., <https://doi.org/10.5194/bg-2017-203>, 2017.