

## ***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.***

### **Anonymous Referee #2**

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General comments: Sabajo et al. evaluates the impact of land use changes on land surface temperatures in Indonesia over the MODIS timespan (1999-2015). The study is well written and provides a good, long-term observational analysis clearly showing the impact of regional deforestation on increasing land surface temperature across an entire region. The only general comment I have is that it would be good to include a seasonality analysis showing how deforestation has changed land surface temperature in both wet and dry season. I know that satellite remote sensing is more challenging during the wet season, but I think evaluating the impact of land changes with seasonality would be useful. This could also highlight likely reductions in ET with land change (and shallower rooting zones) during the dry season. The dry season is also when

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heat impacts (including wildfires) could be more significant.

Specific comments: For Figure 1 (and text in the manuscript related to Figure 1), it might be good to describe the general atmospheric circulation for wet and dry seasons (are winds from the east or from the west). This would help the reader evaluate whether there are substantial land use changes upwind of the forest plots that are used as the baseline “control” to evaluate land surface temperature changes to due land use changes and not overall global climate change.

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