Interactive comment on "Annual oil palm plantation maps in Malaysia and Indonesia from 2001 to 2016" *by* Yidi Xu et al.

Anonymous Referee #2

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The manuscript is addressing the annual oil palm mapping in Malaysia and Indonesia from 2001 – 2016 by using PALSAR/PALSAR-2 imagery, and fill the PALSAR data gap (2011-2014) by using the MODIS data and the BFAST method. This study is well designed and the paper is very well written. But some parts should be further improved before its consideration for publication. Here are my comments for consideration:

1. Effects of stand age. How the stand age could affect the identification of the oil palm plantation as well as the robustness of the BFAST approach? This study claims that the maps include young oil palm trees and smallholder oil palm plantations. What strategies have been considered to make sure the inclusion of young trees and smallholder plantations? 2. Effects of multiple data resolutions. Why does the resolution of 100m perform better to estimate oil palm planting area, not the 50m or other resolution? Is

resolution of 100m sufficient to depict the smallholder details? Which resample technique did you use to resample 25-m PALSAR to 100-m? How did you integrate your 100-m oil palm maps with the 250-m land cover change maps? 3. How many types of land cover were got with the RF classification? Is the multi-class classification consistent with Table 1? Or the binary classification (oil palm; non-oil palm)? 4. You provided two version of oil palm datasets: one considers the oil palm expansion (unidirectional change) and the other one considers oil palm shrinkage (bi-directional change). Which version is more consistent with statistics? Which version is more accurate based on your validation samples? In Figure 5, the oil palm change in 2001-2007 is also unidirectional, thus the color of line might be blue, not green. 5. If there were more than one change time in 2011-2014 or 2001-2006, how did you allocate land cover types?

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