

Earth Syst. Sci. Data Discuss., referee comment RC1
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Comment on **essd-2020-399**

Anonymous Referee #1

Referee comment on "Operational implementation of the burned area component of the Copernicus Climate Change Service: from MODIS 250m to OLCI 300m data" by Joshua Lizundia-Loiola et al., Earth Syst. Sci. Data Discuss.,
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This manuscript presents a new burned area product based on Sentinel-3 data by adapting the burned area mapping algorithm used for the FireCCI51 product that is based on BODIS data, to the new Sentinel-3 data.

To follow the manuscript, especially due to the way it is written, a pre-knowledge about these algorithms from the previous papers would be desirable. The authors many times in the manuscript they describe the algorithms given that the reader is aware of these algorithms.

Although the new algorithm is adapted to the Sentinel-3 data, it makes extensive use of MODIS data by using thermal anomalies, therefore for this point of view the new algorithm may not be considered that it is one exclusively referring to the Sentinel-3 data.

In the Introduction the authors put a lot of emphasis on FireCCI project, from one point of view is justified, but I think it is over-discussed.

I will not make any comment to the algorithm since this is already published (the main core) and also because it is not that much explained in the manuscript, but I will focus my comments on the accuracy of the new product.

The evaluation of the new product is implemented at multiple levels, but I think the most important should be the paragraph mentioned as spatial assessment. The authors also evaluate the product using a consistency assessment with other products, but in this case it is expected to be high since there are common data and common methods between the products. Coming back to the spatial assessment as the author name this, I would like to see a more in depth evaluation and discussion. First of all, the omission is almost 50% (which means that half of the fires are missed) and there is an additional 20% of commission errors which means that the overall error is quite high. For this, I would expect a more in depth evaluation and discussion of the errors. Also, I propose the authors to make an assessment of the errors against the uncertainty assessment. For example, to estimate the accuracy of the new product for different levels of uncertainty assessment. Additionally to this, I would like to see an additional exploration of the spatial and maybe temporal patterns of the errors. In other words are there patterns in the spatial or temporal dimension for the errors?

