Earth Syst. Sci. Data Discuss.,
https://doi.org/10.5194/essd-2020-122-RC1, 2021


Open Access Earth System Science Data Discussions



# *Interactive comment on* "A new satellite-derived dataset for marine aquaculture areas in the China's coastal region" *by* Yongyong Fu et al.

**Anonymous Referee #1**

Received and published: 24 January 2021

This study aimed to produce an accurate national-scale marine aquaculture map at a spatial resolution of 16 m. I can see authors put lots of effort into data processing, experiments and comparisons. However, I do have some significant concerns.

First of all, in the title and the abstract, it claims that this study aims to propose a new dataset of the classification results covering the entire coastline of China based on a new data source that using GF-1 and similar at 16 m spatial resolution. Yet in the text of the manuscript, most parts focused on the utilization of convolution neural networks and the classification method that is advanced than the previous methods.

If the innovation part is the CNN based algorithm, a more challenging experiment (or an artificial toy data manipulation) should be select to illustrate and emphasize the classification performance results, theoretically and empirically.



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Currently, it is not significant to see how the algorithm outperforms previous methods from Fg 7. The classification case selections are straightforward (the classes are obvious in the original image). The traditional pixel-based or object-based classification results might obtain similar results if set the parameters correctly.

If the new method is advanced in all cases on the coast of China, the method is appliable to the entire coast. If there are previous literature already manifested this point, to cite this in the introduction should be adequate.

Actually, The longer coast involves lots of the local variations that could affect the image processing results. It is hardly foreseen that the new method could outperform all other methods in the coastal regions across such larger latitudes. It might be better to focus on a few specific applications for the method's better performance.

Other comments,

I think no need to make data availability as a single section. This can go to data, results, or appendix.

L105, consider to specify the atmosphere profiles and other in situ data used in FLAASH atmospheric correction.

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